SAN FRANCISCO WATER DEPARTMENT

REPORT FOR FISCAL YEAR

1975-1976

RESOURCES & PLANNING

CITY AND COUNTY OF SAN FRANCISCO

GEORGE R. MOSCONE - MAYOR

PUBLIC UTILITIES COMMISSION

John F. Henning, Jr.	President
Dennis V. Carey	Vice President
H. Welton Flynn	Commissioner
Joseph P. Byrne	Commissioner
Lydia Larsen	Commissioner
John D. Crowley	General Manager

REPORT OF THE

SAN FRANCISCO WATER DEPARTMENT

FISCAL YEAR 1975-76

KENNETH R. BOYD
ACTING GENERAL MANAGER

TABLE OF CONTENTS

GENERAL MANAGER'S REPORT 1
Fiscal Year Highlights 3

GENERAL WATER SUPPLY INFORMATION
Deliveries for Consumption 6
Rainfall, Water Production & Storage 8
Per Capita Use in San Francisco 10

REVENUE AND EXPENDITURE 13

DISTRIBUTION AND CONSUMPTION
Systemwide Metered Deliveries 18
Total Water Sales 19
City Distribution Division 23
Water Impoundment and Transmission 25

WATER QUALITY AND TREATMENT 28
Plant Operations 31

CONTRACTS
Construction Contracts 34
Professional Services Contracts 39

LAND, LEASES, PERMITS & PROPERTY TAXES 40

WATER RIGHTS - ALAMEDA CREEK 42

FINANCIAL STATEMENTS
Accounting and Auditing 43
Balance Sheet and Comparative 44
Income Statement
Bond Interest and Redemption 50

MISCELLANEOUS STATISTICS
Bacteriological Analyses 51
Mineral Analyses 54
Length of Transmission Mains 59
Meter Records 61
City Distribution Division
Pipe Records 63
Service Connection Records 65

ORGANIZATION AND PERSONNEL 66

RETIRED EMPLOYEES AND IN MEMORIAM 68

GENERAL MANAGER'S REPORT

AND

FISCAL YEAR 1975-76 HIGHLIGHTS

GENERAL MANAGER'S REPORT

As a municipal utility owned and operated by the City and County of San Francisco, the Water Department is under a public mandate to deliver to all consumers a safe potable water in adequate quantity; to comply with all applicable federal and State regulations for water quality and public safety; to equitably charge and collect for water services; to provide for the needs of the present and future through continued planning and improvements; and to conduct all departmental operations efficiently at reasonable cost.

In carrying out this mandate the Water Department serves water to an estimated one and three quarter million people within the City and County of San Francisco, most of the urban area of San Mateo County, the cities of Palo Alto, Mountain View, Sunnyvale and Milpitas in northern Santa Clara County, and the Hayward, Sunol and Fremont areas in southern Alameda County.

In all its operations the Water Department is entirely self-supporting. All operations, maintenance, improvements, taxes, bond interest and redemptions including the original bond issue for purchase of the Spring Valley Water Company are paid for out of revenues.

CAPITAL PROGRAM

The San Francisco Water Department service area includes not only San Francisco, but also most of the peninsula cities in San Mateo County, and other south Bay communities in Santa Clara and Alameda Counties. In the last 20 years system-wide consumption has increased 95.3 percent. Suburban consumption, which represents about 60 percent of the total system consumption today, has increased only moderately in the last 5 years as compared to the rapid rise experienced in the 1950's and 1960's.

To meet future water needs the Water Department plans to spend approximately 63 million dollars in the next 6 years for capital improvement and plant rehabilitation. Approximately 43 million dollars of this capital program will be financed from annual revenues, and 20 million dollars will be financed from Water System Improvement Bonds.

RATE INCREASE

It became apparent late in 1975 that additional revenue was needed to finance the 1976-77 budget. The additional revenue needed could be realized by a 15 percent increase in water rates.

After a public hearing late in January, the Public Utilities Commission approved such a 15 percent increase and forwarded the proposal to the Board of Supervisors.

The Board rejected the proposal, and returned the matter back to the Public Utilities Commission with a suggestion for consideration of a "lifeline rate" and a smaller general increase. The Board offered to release $2.9 million from the sale of Water Department land to the State for I-280 to help reduce the size of the increase.

After two public hearings on the 9th and 23rd of March, the Public Utilities Commission adopted a "lifeline rate" and a 5.75 percent increase in all other charges. The "lifeline rate" was a reduction of $.30 per 100 cu. ft. on the first 600 cu. ft. of water per month.

Although it was pointed out to the Board that the reduced rate for the first 600 cu. ft. per month was unacceptable to the Peninsula users, the Board nonetheless approved the "lifeline rate" and 5.75 percent general increase.

In mid-June the U. S. District Court issued a temporary restraining order prohibiting the imposition of the higher rates and the "lifeline rate" which were scheduled to go into effect on the first of July.

After a careful review of revenue and expenditures for 1976-77, the Department determined it can carry on without a rate increase. This is possible because of final budget costs, the unexpected increase in water sales because of the drought, and over six-hundred thousand dollars in wages not paid during the City's craft workers strike.

COLLECTION OF UTILITY TAX, INDUSTRIAL WASTE SURCHARGE, AND SEWER SERVICE CHARGE

Under City Ordinances the Water Department is charged with the responsibility of collecting a Utility Tax, an Industrial Waste Surcharge, and a Sewer Service Charge.

Utility Tax collections are placed in the General Fund. Funds collected under the Industrial Waste Surcharge and Sewer Service Charge are each deposited in special funds under the jurisdiction of the Department of Public Works.

Taxes and charges collected during 1975-76 were:

Utility Tax	$ 672,053
Industrial Waste Surcharge	357,249
Sewer Service Charge	5,717,684

STATE AID AND FEDERAL AID

No State or federal agency aid was available during the fiscal year 1975-76.

Kenneth R. Boyd
Acting General Manager

HIGHLIGHTS

Peninsula Watershed Recreation Development Plan

After almost two years of study and conferring with citizen advisory committees in San Francisco and in San Mateo counties, EDAW, Inc., a San Francisco based environmental planning firm retained by the Department, completed a "Recreational Development Plan - San Francisco Peninsula Watershed Lands". The Plan and a draft EIR/EIS was completed in August, 1975. The plan calls for a low intensity development program that would provide visitors with a variety of recreational opportunities keyed to experiencing the natural beauty of the watershed.

The plan includes 40 miles of trails, six parking areas, six picnic areas, a 25-acre play meadow, and a nature study center adjacent to the entrance road to the Phleger Estate (south of Mrs. William Roth's Filoli Estate).

Although the plan does not include a golf course, it states that an 18-hole golf course could be built on Water Department lands and a portion of the Filoli Estate. This, however, is contingent upon San Mateo County acquisition of the Filoli lands, and an agreement covering San Mateo County's use of 162 acres of Water Department land.

Cost of development has been estimated at $2.5 million, and annual maintenance and operating costs at $647,000.

Exclusive of a golf course, revenue from the recreation area would amount to about $200,000 annually, which means the operation would require a yearly subsidy of approximately $447,000.

On January 27, 1976, after a public hearing, the Public Utilities Commission adopted Resolution 76-0047, approving the concepts of the Plan.

The draft Environmental Impact Report and Statement is presently being reviewed by the City Planning Department. Public hearing on the Draft EIR/EIS will probably be held late this year after revisions are completed.

Proposed Use of Balboa Reservoir Site as Muni Motor Coach Storage and Service Facility

The Muni Railway Transportation Study Coordinating Committee held an evening meeting on May 20 to discuss the possible use of Balboa Reservoir, South Basin, as a Muni Motor Coach Storage and Service Facility. Approximately 300 attended the meeting.

A spokesman for Consultants Wilbur Smith and Associates and John Boles Associates, presented layouts of the bus storage and service facilities and provided comprehensive facts and figures on possible air pollution and noise levels.

The speakers representing the neighborhood group, however, indicated they did not approve of the proposed use by Municipal Railway, and the Transportation Study Coordinating Committee voted to drop its plan for using the Balboa Reservoir site as a bus storage yard. Engineering design for the reservoir is proceeding.

Water Conservation

The rainy season of 1975-76 produced one of the smallest water yields in the records of the Water Department. Compared to a normal local production of 18.9 billion gallons per year, this year's production was only 2 billion gallons. Since our records indicate that two successive dry years can occur, projection of the effect of the second dry year have been made in cooperation with the Hetch Hetchy Project. The results indicate that sufficient water should be available for the entire service area of the Department, but steps must be taken to maintain a sufficient reserve in our reservoirs in Alameda and San Mateo Counties.

The Hetch Hetchy Project is undertaking the re-establishment of its capabilities of bringing water from the Lake Eleanor-Cherry supplies to O'Shaughnessy aqueducts.

A voluntary water conservation program has been established. The plan is designed to encourage water conservation in San Francisco and by our resale customers. Printing of a "stuffer" which points out the benefits of the prudent use of water will be mailed to all San Francisco customer beginning July 1. Preliminary discussions have taken place with various resale customers, and a meeting to be attended by the heads of such agencies is scheduled for early July.

The City's main flushing program has been suspended in order to conserve the millions of gallons normally used. However, the temporary cessation of main flushing may result in more customer complaints.

Personnel Shortage.

Beginning in 1975, the Department has experienced a continuing shortage of personnel because of delays in approval of requisitions by the Mayor's Office and the Board of Supervisors.

The results are reflected in the increased backlog of maintenance work, curtailed main and service installations, increased trespassing on watershed lands and vandalism, and our reduced ability to service our customers.

In addition, the cuts in next year's craft pay will certainly increase the number of retirements, all of which will compound the operating divisions' problems.

At the present time there are 38 unfilled positions in the Department.

During 1976-77 it is essential that personnel requisitions be filled without undue delay if the Department's operations are not to suffer. This is especially true since the number of permanent employees has been reduced 10 percent, with 10 more positions scheduled to be cut before the end of the year (total 12%).

City Craft Workers' Strike - 1976

This year's strike by City craft workers lasted 38 days, starting on March 31 and ending on May 7. The striking unions included the plumbers, electricians, machinists, and laborers. Other craft unions, such as the stationary and operating engineers, truck drivers, painters, and auto machinists observed the picket lines. Except for a few supervisory people, practically every worker needed for the physical operation of the water system was not working.

However, under a memorandum agreement with the Stationary Engineers' Union, the key personnel for the Sunol and San Andreas Water Treatment Plants were allowed to work and continue operations of these vital plants.

The non-craft employees for the most part remained on the job.

The shutdown of the Hetch Hetchy Aqueduct for the duration of the strike strained the Department's ability to supply water. Fortunately, our Bay Area reservoir, treatment plants, pump stations, and other facilities were able to meet the demand. Some facilities, such as the Sunol Filter Plant, were pushed to their limits.

In the City there were many main leaks that went unrepaired. One of the larger leaks was in a 30 inch main crossing Golden Gate Park. Because this leak affected water pressures in a large area of the Richmond district, the Department had to hire a private contractor to make the repairs. Pickets at this site made quite a disturbance, and the incident received wide press coverage.

There were many incidents of strike related vandalism or suspected vandalism in the City and at our suburban facilities.

Thanks to the untiring efforts of the management staff many of whom worked long, long hours, the Department was able to continue serving water to the people during this emergency.

GENERAL WATER SUPPLY INFORMATION

DELIVERY FOR CONSUMPTION

In addition to serving San Francisco, the Water Department supplies water to most of the urban areas of San Mateo County; to the cities of Palo Alto, Mountain View, Sunnyvale and Milpitas in northern Santa Clara County; and to the Hayward, Fremont and Sunol areas in southern Alameda County.

Approximately 71% of the water delivered to consumers is imported from Hetch Hetchy and the balance from Bay Area sources.

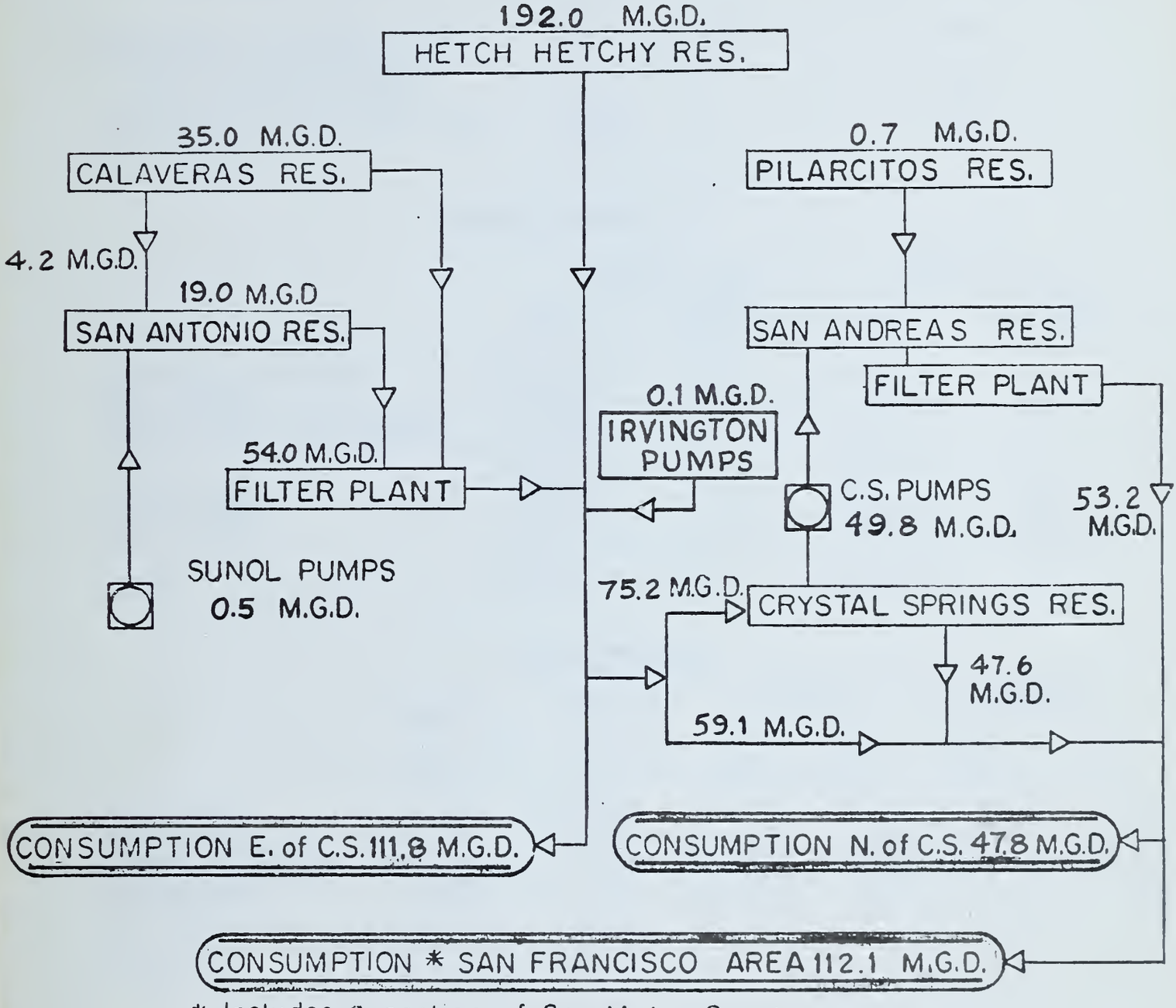
DELIVERIES FOR CONSUMPTION

1975 - 1976

	Million Gallons	MGD Average	%
From Hetch Hetchy	70,278.8	192.0	70.7
From Alameda and Peninsula Sources	29,178.7	79.7	29.3
TOTAL	99,457.5	271.7	100.0

TRANSMISSION

1975-76 AVERAGES



* Includes a portion of San Mateo County

TOTAL SUBURBAN	159.6	M.G.D.
SAN FRANCISCO	112.1	M.G.D.
SYSTEM TOTAL	271.7	M.G.D.

RAINFALL, WATER PRODUCTION AND WATER STORAGE

RAINFALL

Gaging Stations	1975-76	Comparison to Normal
Calaveras (Alameda County)	10.77 inches	49%
Crystal Springs Cottage (San Mateo County)	9.73 "	38%
Pilarcitos (San Mateo Co.)	21.23 "	48%
San Andreas " " "	14.51 "	40%

WATER PRODUCTION

	1974-75		1975-76	
	MG	MGD Average	MG	MGD Average
Calaveras (Alameda Co.)	22,557.9	61.8	306.6	0.8
San Antonio " "	2,737.9	7.5	5.5	0.1
Sunol Filter Galleries	2,243.6	6.1	1,028.8	2.8
Crystal Springs (San Mateo Co.)	2,171.7	6.0	204.4	0.5
Pilarcitos " "	1,232.6	3.4	207.6	0.6
San Andreas " "	1,124.7	3.1	115.5	0.3
TOTAL	32,068.4	87.9	1,868.4	5.2

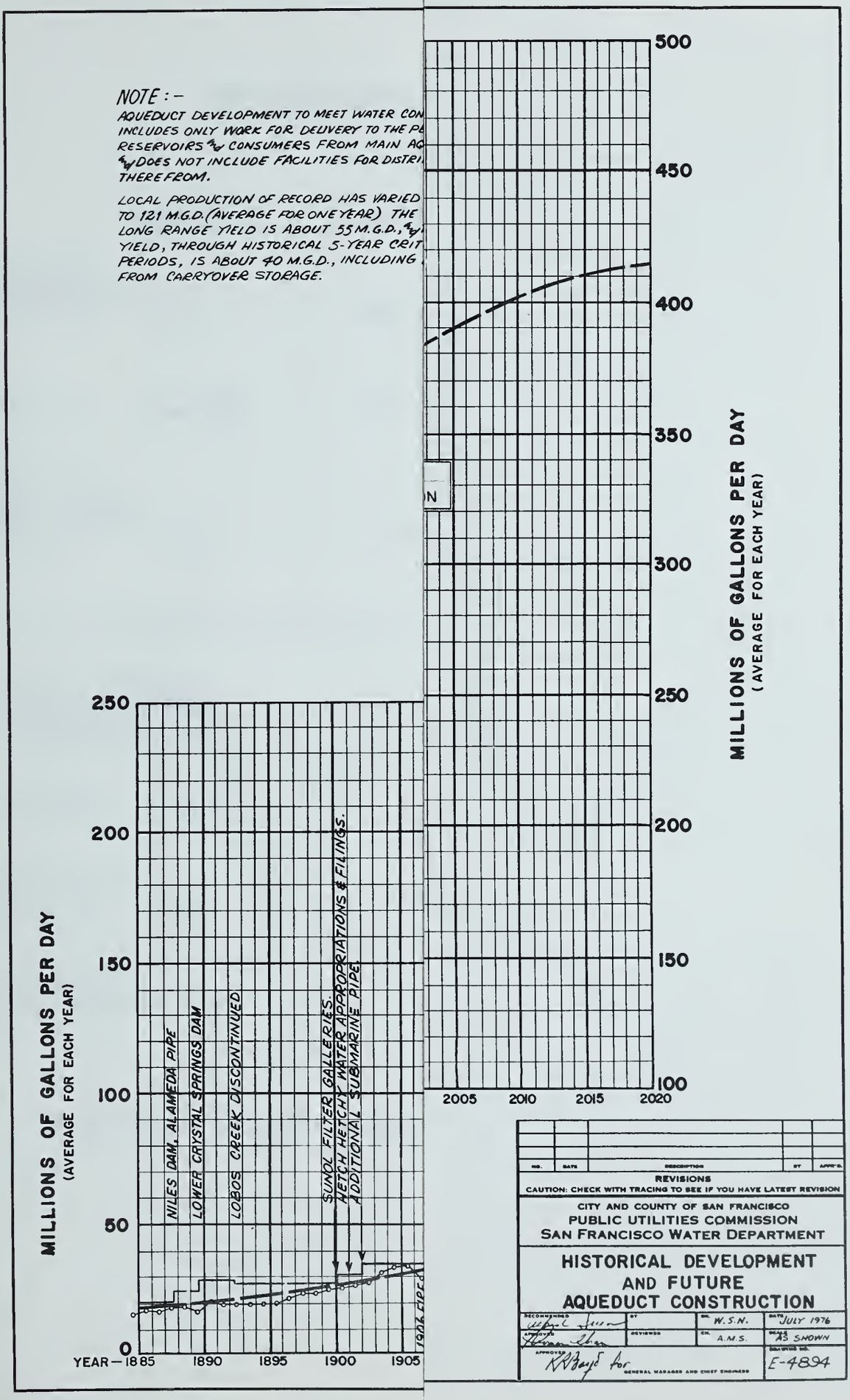
WATER STORAGE

	7-01-75	7-01-76	Minimum		Maximum	
	MG	MG	Date	MG	Date	MG
Calaveras	25,103	11,128	7-1-76	11,128	7-2-75	25,103
San Antonio	12,419	6,912	7-1-76	6,912	7-2-75	12,373
Crystal Springs	15,976	8,451	7-1-76	8,451	7-2-75	15,913
Pilarcitos	829	769	11-4-75	683	8-27-75	861
San Andreas	4,779	3,919	5-18-76	3,477	4-3-76	5,399
TOTAL	59,106	31,179				

NOTE :-

AQUEDUCT DEVELOPMENT TO MEET WATER CON
INCLUDES ONLY WORK FOR DELIVERY TO THE PE
RESERVOIRS & CONSUMERS FROM MAIN AQ
& DOES NOT INCLUDE FACILITIES FOR DISTRI
THEREFROM.

LOCAL PRODUCTION OF RECORD HAS VARIED
TO 121 M.G.D. (AVERAGE FOR ONE YEAR) THE
LONG RANGE YIELD IS ABOUT 55 M.G.D., &
YIELD, THROUGH HISTORICAL 5-YEAR CRIT
PERIODS, IS ABOUT 40 M.G.D., INCLUDING
FROM CARRYOVER STORAGE.



REVISIONS
CAUTION: CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

CITY AND COUNTY OF SAN FRANCISCO
PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT

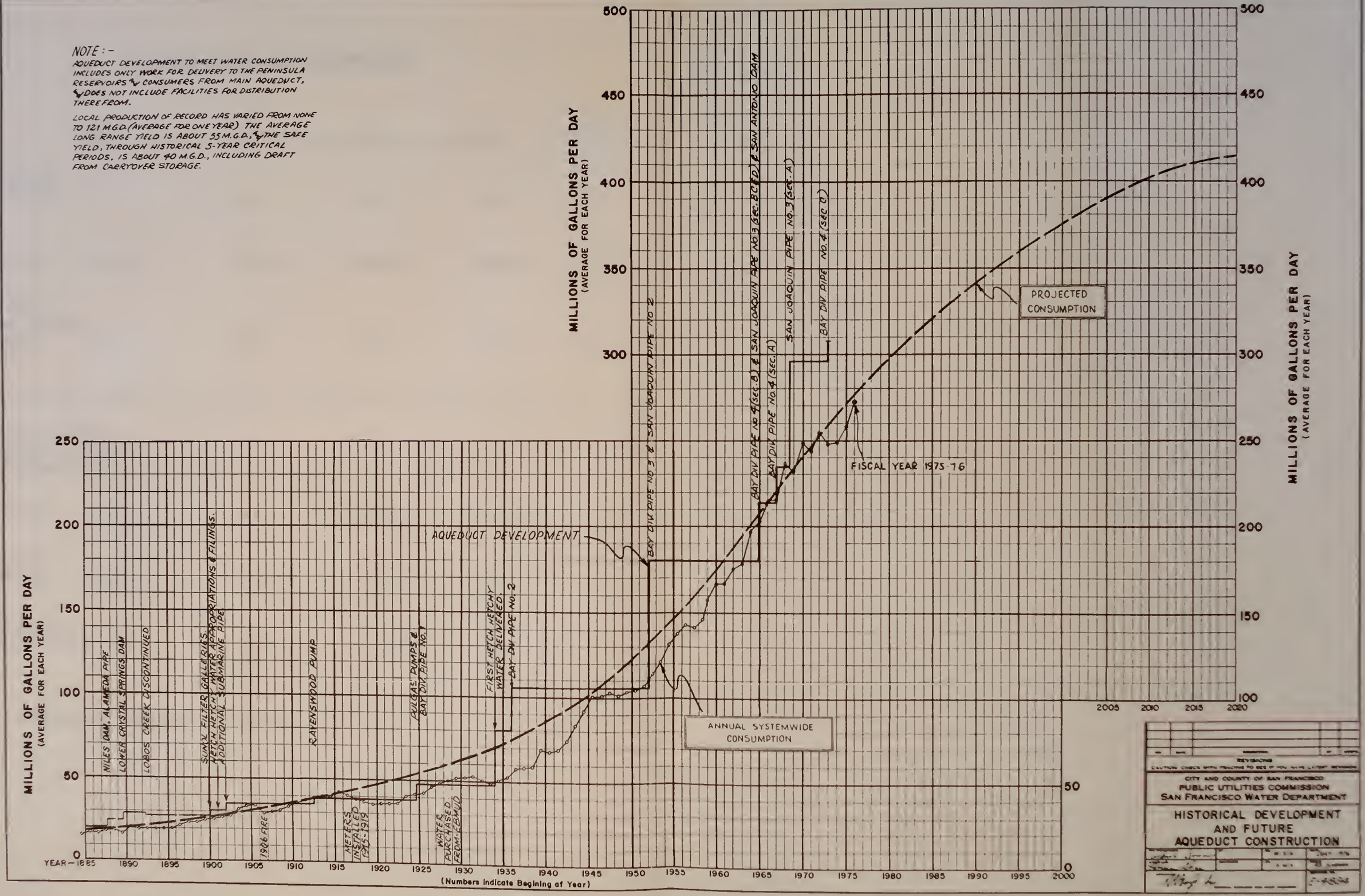
HISTORICAL DEVELOPMENT AND FUTURE AQUEDUCT CONSTRUCTION

RECOMMENDED	BY	DR. W.S.N.	DATE JULY 1976
APPROVED	REVIEWED	CH. A.M.S.	SCALE AS SHOWN
APPROVED K.V. Boyd for GENERAL MANAGER AND CHIEF ENGINEER			DRAWING NO. E-4894

NOTE :-

AQUEDUCT DEVELOPMENT TO MEET WATER CONSUMPTION INCLUDES ONLY WORK FOR DELIVERY TO THE PENINSULA RESERVOIRS & CONSUMERS FROM MAIN AQUEDUCT, & DOES NOT INCLUDE FACILITIES FOR DISTRIBUTION THEREFROM.

LOCAL PRODUCTION OF RECORD HAS VARIED FROM NONE TO 121 M.G.D. (AVERAGE FOR ONE YEAR) THE AVERAGE LONG RANGE YIELD IS ABOUT 55 M.G.D., & THE SAFE YIELD, THROUGH HISTORICAL 5-YEAR CRITICAL PERIODS, IS ABOUT 90 M.G.D., INCLUDING DRAFT FROM CARRYOVER STORAGE.



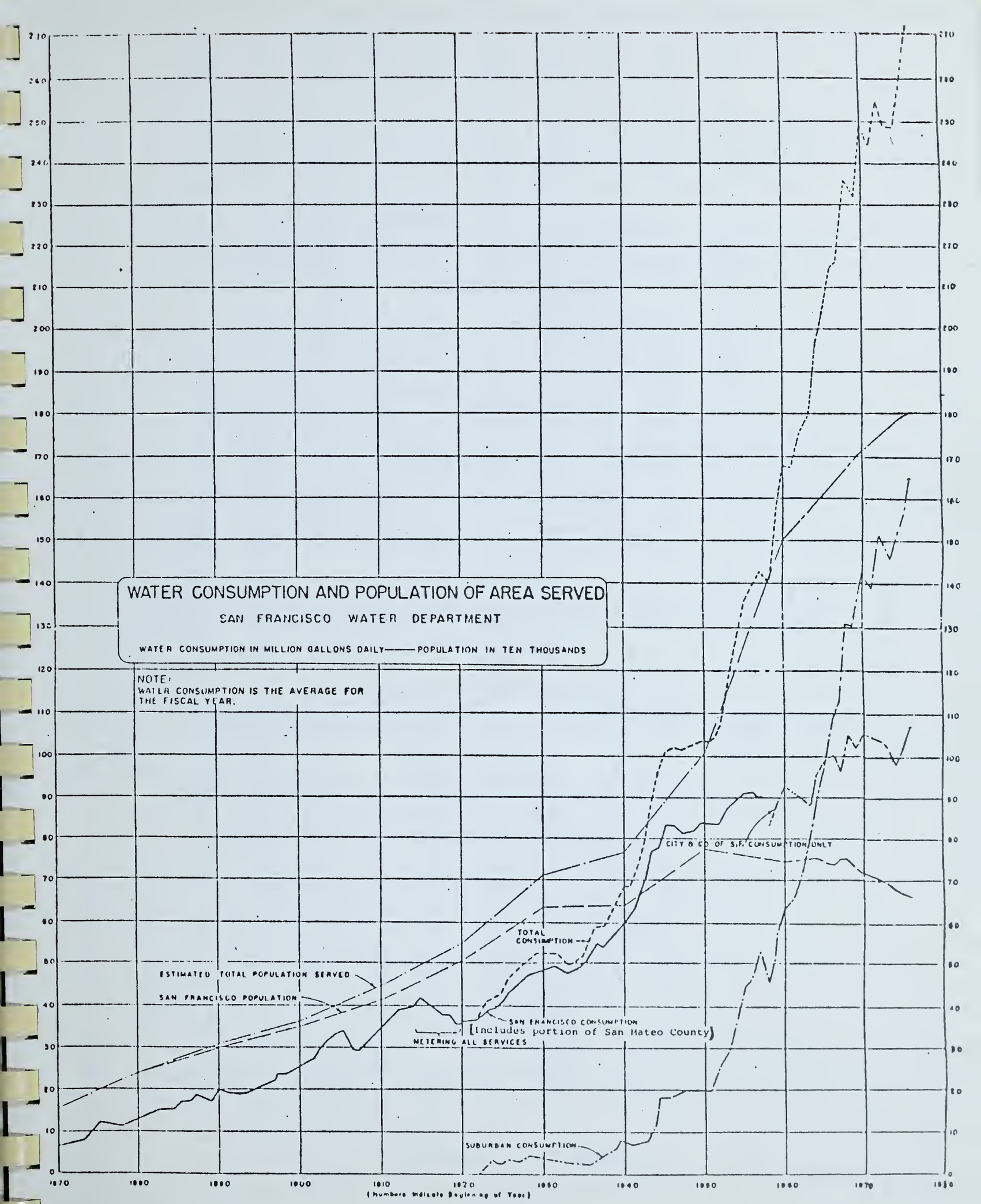
CITY AND COUNTY OF SAN FRANCISCO
PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT

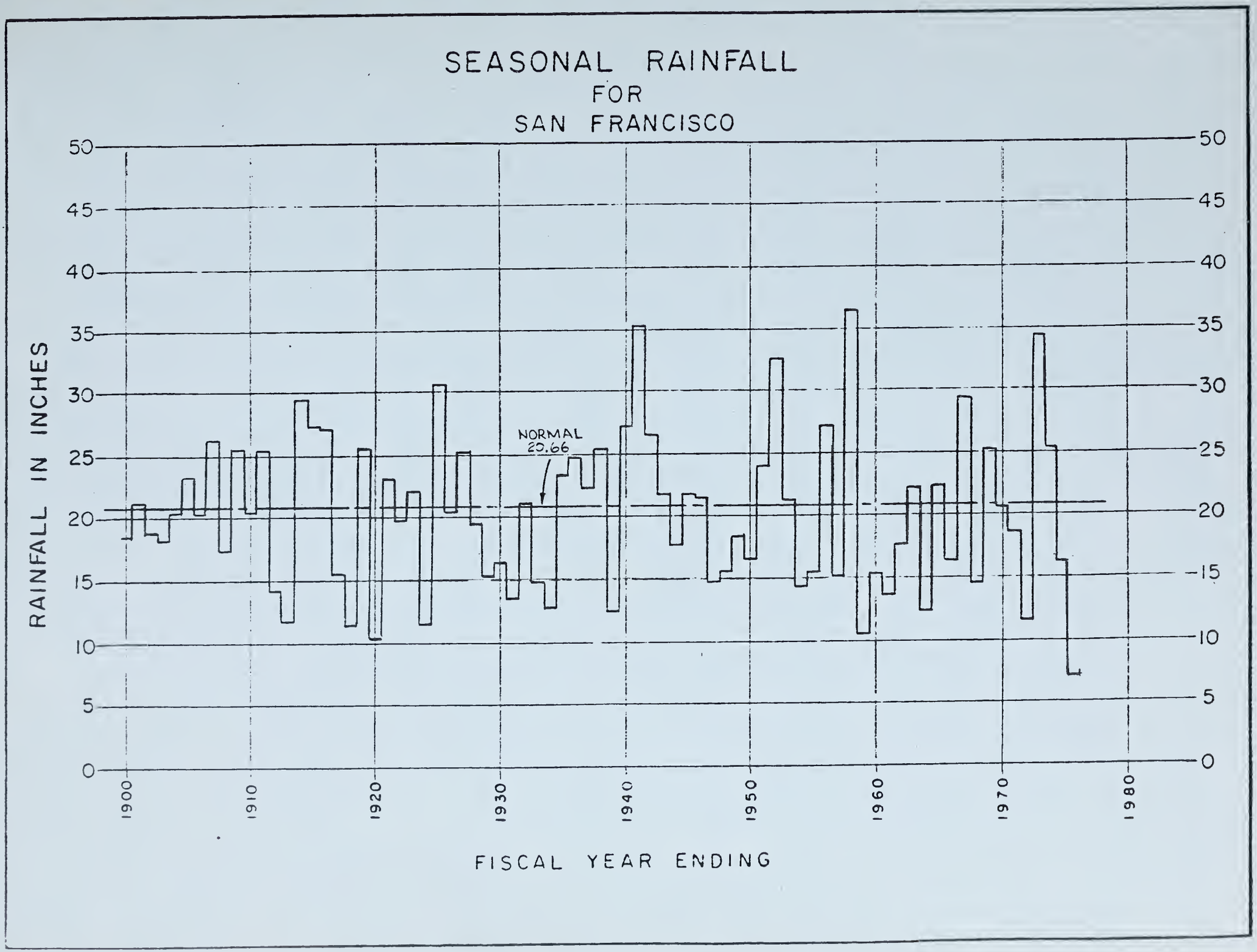
HISTORICAL DEVELOPMENT AND FUTURE AQUEDUCT CONSTRUCTION

PER CAPITA USE IN SAN FRANCISCO

	1940	1950	1960	1970	1975-76
Average Daily Consumption in S.F. (MGD)	47.9	68.9	80.7	98.9	94.2
S.F. Population	634,536	775,357	740,316	715,674	665,000
Average Daily Use Per Capita (Gallons)	76	89	109	138	142
Classes of Consumers (Percentage of Total S.F. Consumption):					
Residential	39.4	37.7	39.1	36.5	37.1
Commercial* & Industrial	51.8	54.5	52.4	54.5	53.3
Municipal & Miscellaneous	8.8	7.8	8.5	9.0	9.6

* Commercial includes apartments.


WATER CONSUMPTION AND POPULATION OF AREA SERVED
SAN FRANCISCO WATER DEPARTMENT
WATER CONSUMPTION IN MILLION GALLONS DAILY——POPULATION IN TEN THOUSANDS
NOTE:
WATER CONSUMPTION IS THE AVERAGE FOR THE FISCAL YEAR.
CITY & CO. OF S.F. CONSUMPTION ONLY
TOTAL CONSUMPTION
ESTIMATED TOTAL POPULATION SERVED
SAN FRANCISCO POPULATION
SAN FRANCISCO CONSUMPTION
(Includes portion of San Mateo County)
METERING ALL SERVICES
SUBURBAN CONSUMPTION
(Numbers Indicate Beginning of Year)


SEASONAL RAINFALL
FOR
SAN FRANCISCO
RAINFALL IN INCHES
NORMAL
20.66
0
5
10
15
20
25
30
35
40
45
50
1900
1910
1920
1930
1940
1950
1960
1970
1980
FISCAL YEAR ENDING

REVENUE AND EXPENDITURE

REVENUE

The Water Department is entirely self supporting. All operating costs, taxes, capital costs, bond interest and bond redemption are paid from revenues. In addition, the Department furnishes free water to other San Francisco city departments that are tax supported.

Water Sales were 12.1% more than for the previous year. Net sales in San Francisco produced 49.0% of the water sales revenue, with the balance of 51.0% coming from deliveries outside of the city.

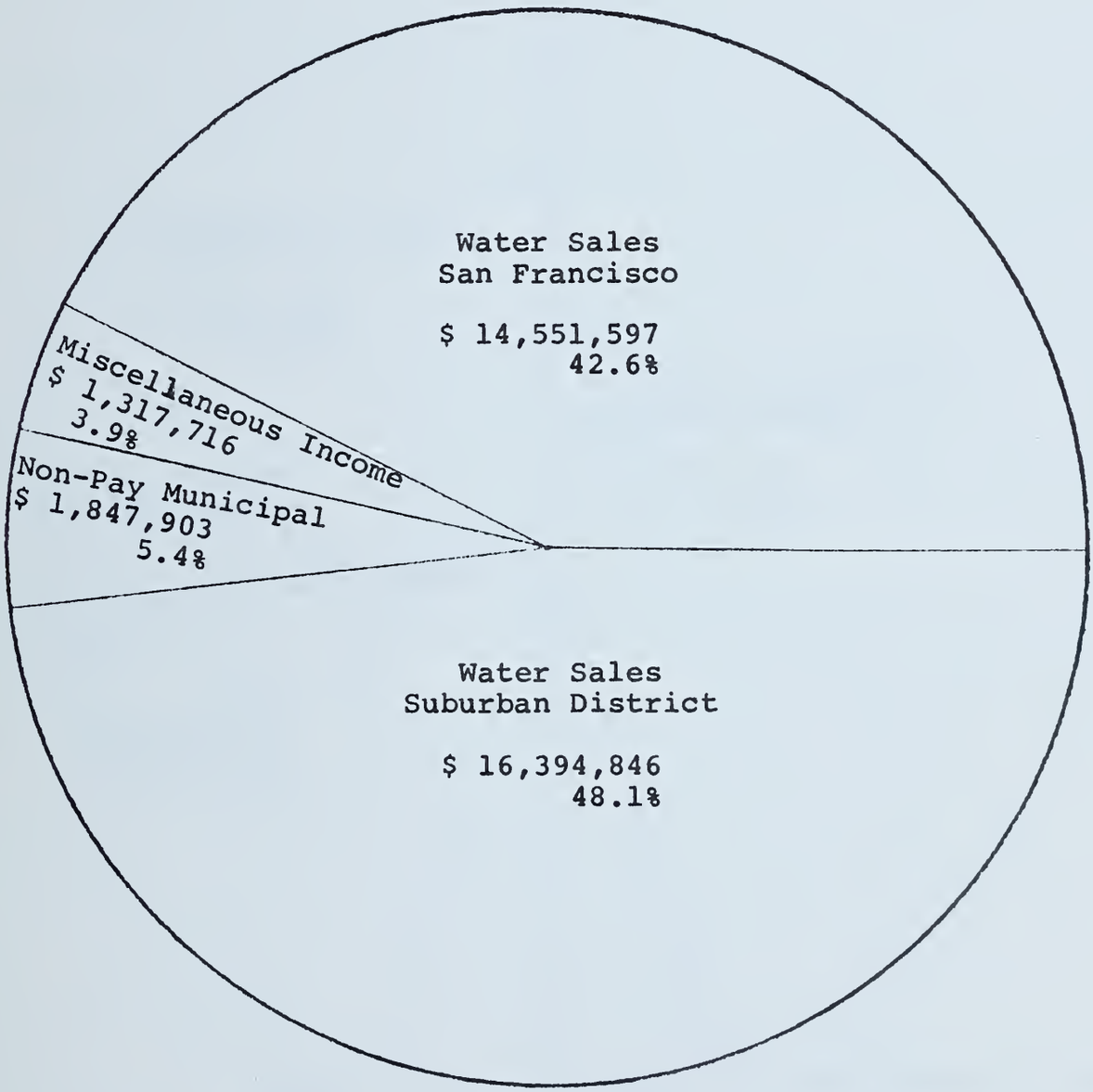
	Metered Quantities	Revenue
San Francisco	36.7%	49.0%
Suburban	63.3%	51.0%

Most suburban sales are to other agencies, who in turn resell the water through their own distribution systems.

The following tables give detail of revenue sources and expenditures:

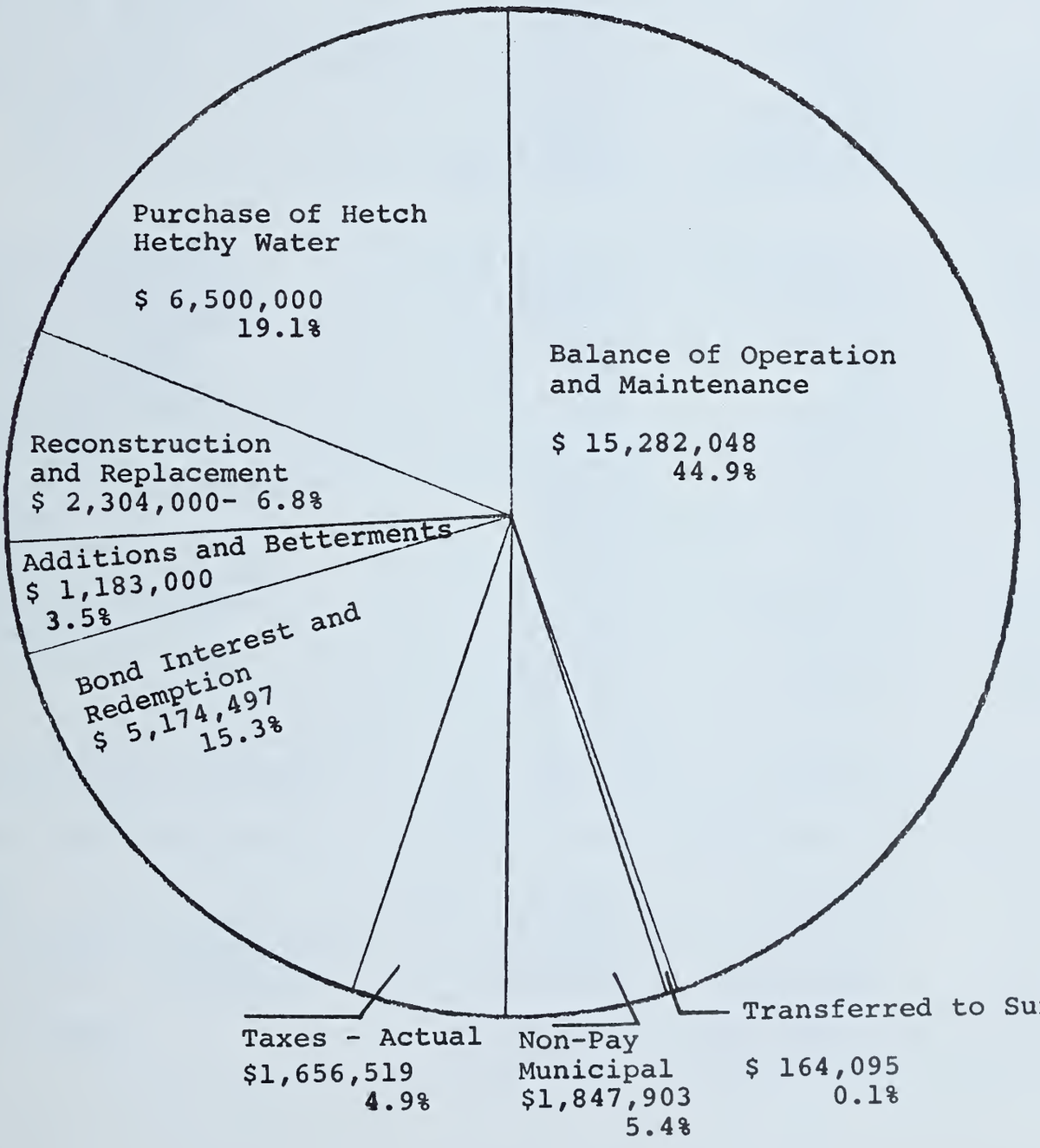
SOURCE OF INCOME

$ 34,112,062



DISPOSITION OF INCOME

$ 34,112,062



SAN FRANCISCO WATER DEPARTMENT
COMPARISON OF BUDGETED AND ACTUAL EXPENDITURES (INCLUDING ENCUMBRANCES)
FISCAL YEAR 1975-76

DESCRIPTION	BUDGET	ACTUAL	+ UNDER, OVER
Permanent Salaries	$ 3,183,644	$ 2,635,044	$ -548,600
Allowance for Overtime	42,500	35,155	-7,345
Allowance for Holidays	15,895	15,200	- 695
Extended Work Week	58,000	55,540	-2,460
Compensation in Lieu of Sick Pay	118,932	118,932	0
Temporary Salaries	36,700	30,606	-6,094
Wages	7,016,580	5,680,881	-1,335,699
Wages - Gardeners	295,274	263,221	-32,053
	$10,767,525	$ 8,834,579	$ -1,932,946
Contractual Services	$ 1,343,492	$ 1,405,241	$ 61,749
Materials & Supplies	1,504,534	1,443,865	-60,669
Compensation Insurance	106,379	100,052	-6,327
Judgments & Claims	30,000	29,288	- 712
Fidelity Insurance	466	478	12
Automobile Insurance	30,102	31,615	1,513
Fire Insurance	4,031	10,810	6,779
Other Insurance	14,399	43,659	29,260
Commissions for Collections	18,000	14,141	-3,859
Assessments	5,000	5,522	522
Membership Dues	1,200	1,327	127
Fees, Licenses & Permits	3,800	5,898	2,098
Retirement Allowances	2,017,458	1,639,516	-377,942
Social Security	468,660	390,687	-77,973
Health Service System	151,164	119,216	-31,948
Taxes	1,696,773	1,656,519	-40,254
Rents	310	0	- 310
Services of Other Departments	506,951	506,951	0
Electronic Data Processing	502,179	502,179	0
TOTAL OPERATING BUDGET	$19,172,423	$16,741,543	$ -2,430,880
Equipment	$ 204,926	197,024	-7,902
Additions & Betterments	1,183,000	1,183,000	0
Reconstruction & Replacement	2,304,000	2,304,000	0
Bond Interest & Redemption	5,201,275	5,174,497	35,778
TOTAL BUDGET	$28,074,624	$25,600,064	$ -2,474,560

SAN FRANCISCO WATER DEPARTMENT
COMPARISON OF ESTIMATED AND ACTUAL RECEIPTS
FISCAL YEAR 1975-76

REVENUE	RECEIPTS BUDGET	ACTUAL	- UNDER, OVER
Collections from Sale of Water	$30,524,000	$30,946,443	$422,443
New Installations	110,000	200,767	90,767
Rents	750,000	911,765	161,765
Interest	180,000	129,960	-50,040
Sale of Walnuts	15,000	8,527	-6,473
Miscellaneous Revenue	30,000	66,697	36,697
TOTAL GROSS REVENUE	$31,609,000	$32,264,159	$655,159
RECEIPTS BY TRANSFER			
From Unappropriated Revenue (Prior Year)	$ 2,965,624	$ -164,095	$-3,129,719
TOTAL RECEIPTS	$34,574,624	$32,100,064	$-2,474,560
LESS			
Allocation of Revenue to Hetch Hetchy Project	$ 6,500,000	$ 6,500,000	0
TOTAL BUDGET	$28,074,624	$25,600,064	$-2,474,560

DISTRIBUTION AND CONSUMPTION

SYSTEMWIDE METERED DELIVERIES

Within the City of San Francisco the Department distributes, delivers and meters water directly to consumers. Outside of San Francisco, water is delivered and metered from transmission mains to water purveyors who distribute to customers in their service areas.

METERED DELIVERIES

1975 - 1976

	Million Cubic Feet Year	M.G.D.	%	Increase Over Prior Year
City*	4,611.2	94.5	36.7	0.4%
Suburban **	7,964.8	163.2	63.3	5.7%
Systemwide	12,576.0	257.7	100.0	3.7%

* Includes 375.8 million cubic feet (2,811.0 million gallons) used by municipal non-pay accounts.

** Includes 124.1 million cubic feet (928.3 million gallons) used by suburban non-pay accounts.

TOTAL WATER SALES

FISCAL YEAR - 1975-76

Area, Utility or District	Metered Delivery (2) 100 Cu. Ft.	Average MGD	Charges $
SAN MATEO COUNTY			
Bayshore City (Dimond Public Utility Dist)	129,428	0.26	33,961
Brisbane, City of	133,975	0.27	31,694
Guadalupe Valley Municipal Improvement District	126,463	0.26	34,594
Daly City, City of	1,968,439	4.02	427,942
Colma (Broadmoor, Calif. Water Service Company)	293,650	0.60	65,424
South San Francisco (Calif. Water Serv. Co.)	3,051,388	6.24	658,589
North Coast Co. Water Dist.	1,917,356	3.92	394,688
Coastside Co. Water Dist.	232,397	0.48	55,109
San Bruno, City of	1,248,540	2.55	283,654
S.F. International Airport			
Sold	676,442	1.38	171,369
S.F. Use (1)	432,469	0.88	
Millbrae, City of	1,336,690	2.73	293,242
Burlingame, City of	2,343,461	4.79	505,328
Hillsborough, Town of	1,512,361	3.09	333,649
Crystal Springs Golf Club (1)	112,140	0.23	
San Mateo (Calif. Water Service Company)	6,129,984	12.53	1,233,800

TOTAL WATER SALES (CONTINUED)

FISCAL YEAR - 1975-76

Area, Utility or District	Metered 100 Cu. Ft.	Delivery (2) Average MGD	Charges $
SAN MATEO COUNTY (continued)			
Belmont County Water Dist.	1,894,502	3.87	409,940
San Carlos (Calif. Water Service Company)	2,130,878	4.36	458,237
Westborough County Water District	467,266	0.95	101,090
Redwood City, City of	4,375,395	8.94	905,387
(Calif. Water Serv. Co.)	426,251	0.87	98,984
Cordilleras Mutual Water Association	2,915	0.01	1,206
Palomar Pk. Co. Water Dist.	30,957	0.06	9,211
Woodside (Calif. Water Serv. Co.)	1,531,659	3.13	316,284
Bear Gulch District (Calif. Water Serv. Co.)	1,046,090	2.14	224,069
Menlo Park, City of	1,948,677	3.98	421,104
Menlo Park, (Calif. Water Service Company)	2,157,732	4.41	465,282
East Palo Alto Water Dist. (Formerly Ravenswood Water District)	1,026,022	2.10	217,473
Skyline County Water Dist.	47,224	0.10	13,610
Estero Municipal Improvement Dist.	1,615,390	3.30	337,974
Los Trancos Co. Water Dist.	25,096	0.05	7,579
City of San Francisco			
County Jail (1)	352,138	0.72	
Social Services (1)	3,316	0.01	
Hassler Hospital (1)	5,023	0.01	

TOTAL WATER SALES (CONTINUED)

FISCAL YEAR - 1975-76

Area, Utility or District	Metered 100 Cu. Ft.	Delivery (2) Average MGD	Charges $
SAN MATEO COUNTY (continued)			
Other Water delivered in San Mateo County	521,770	1.07	168,416
Total for San Mateo County	41,253,484	84.31	8,678,889
SANTA CLARA COUNTY			
Palo Alto, City of	8,580,746	17.54	1,782,818
Purissima Hills County Water District	642,418	1.31	139,216
Mountain View, City of	5,082,694	10.39	1,028,196
Moffett Field	841,522	1.72	173,451
Sunnyvale, City of	5,556,678	11.36	1,144,359
Agnew State Hospital	19,319	0.04	7,622
Milpitas, City of	2,424,684	4.95	568,627
San Jose, City of	177,232	0.36	40,699
Santa Clara Water Dept.	302,811	0.62	70,104
Other Water delivered in Santa Clara County	1,130,073	2.31	244,808
Total for Santa Clara Co.	24,758,177	50.60	5,199,900
ALAMEDA COUNTY			
Alameda County Water Dist.	4,707,926	9.62	1,019,965
Newark (various consumers)	157,777	0.32	39,492
Hayward Muni. Water System	7,843,053	16.03	1,594,076

TOTAL WATER SALES (CONTINUED)

FISCAL YEAR - 1975-76

Area, Utility or District	Metered 100 Cu. Ft.	Delivery(2) Average MGD	Charges $
ALAMEDA COUNTY (continued)			
Sunol			
Domestic Supply	47,868	0.10	20,236
Water Dept. Lands (1)			
From Transmission Line	703,715	1.44	
Water Dept. Lands(1)			
Not From Transmission Line	178,401	0.36	
Vallecitos	273,406	0.56	59,589
Castlewood Country Club	22,778*	0.05	10,000
Pleasanton Well Field			
Agricultural Use (1)	17,473	0.03	
Other Water Delivered in Alameda County	58,181	0.12	24,609
Total for Alameda County	14,010,578	28.63	2,767,967
Total for San Mateo, Santa Clara & Alameda Counties	80,022,239	163.54	16,646,756
SAN FRANCISCO COUNTY			
San Francisco	42,354,037	86.56	14,775,187
San Francisco Non-Pay Municipal	3,757,668	7.68	
Total for San Francisco County	46,111,705	94.24	
Total for San Francisco Water Department System	126,133,944	257.78	31,421,943 (3)

(1) Non-Paying Municipal accounts.

(2) Metered delivery does not include system loss which for 1975-76 amounted to 5.4% of total water sales.

(3) Represents total billing for water sold without adjustment for allowances, etc.

* Does not include 90,000,000 gallons in free water contract

CITY DISTRIBUTION DIVISION

Responsibilities and Functions

This Division is responsible for all facilities, pipeline, and mains for the delivery of water to consumers in the City.

Additionally, the responsibility for maintaining the Department's physical plant, operating equipment, and automotive equipment belongs to the major shops operated by this Division. The Division also operates the Department's central warehouse and pipe yard.

The field forces work on new construction of mains and services, maintenance of facilities, and emergency services. A Department's gateman responds to all fires of two alarms or more to regulate valves to provide increase water pressure as needed.

Major Facilities

City Corporation Yard: includes Division's administrative office, central control headquarters; machine, meter, auto , carpenter and pattern shops; truck and auto storage; warehouse and pipe yard.

13 reservoirs and large tanks with a total capacity of 414 million gallons

7 small tanks

4 pump stations with capacity from 10 to 50 million gallons per day each.

17 small pump stations

Approx. 1200 miles of water mains

Number of Personnel

Office staff	18
Shops & Warehouse	41
Field	140
Total	199

Fiscal Year Operating Results

	1974-75	1975-76
1. Main breaks and leaks repaired:	100	92
2. New services installed:	586	594
3. Services repaired:	1,783	1,477
4. Services renewed: by S.F.W.D.	2,561	4,687
by contract	2,644	104
5. Linear feet of main flushed:	681,300	2,099,610
6. Individual services flushed:	237	190
7. Valves operated and checked:	8,553	6,129
8. Valves repaired and rebuilt:	235	200
9. Service maintenance:	17,249	13,601
10. Meters installed:	5,697	4,086
11. Meters repaired: in shop	4,766	4,199
in field	5,458	5,628
12. Hydrants installed and relocated:	54	60
13. Main extensions:	28	46
14. Connections:	87	54
15 Leak detection survey: miles of main	110	107

16. During the year the shops repaired, rebuilt, or fabricated diesel engines, motors, pumps, special pipe fittings, valve operaters, etc., The auto shop performed all routine as well as major maintenance on the Department's fleet of trucks and autos.

17. Water main inventory - City Distribution System:

Main inventory 7/1/75	1,176.6 miles
New main added 1975-76	4.5 "
Old main removed 1975-76	2.4 "
Main inventory 6/30/76	1,178.7 "

WATER IMPOUNDMENT AND TRANSMISSION

Responsibilities and Functions

The responsibilities for water impoundment and transmission rest with the Department's two suburban divisions. The Peninsula Division is responsible for facilities in San Mateo and Santa Clara Counties, the Alameda Division for facilities in Alameda County.

The principal function of each Division is to operate and maintain the transmission pipelines, pump stations, and reservoirs to deliver water to our suburban customers and to San Francisco. The Divisions also manage the watersheds, pipeline rights-of way, and other lands of the City, totaling over 62,000 acres.

Major Facilities

Crystal Springs, San Andreas, Pilarcitos, Calaveras, and San Antonio Dams and Reservoirs.

Four Bay Division pipelines.

Coast Range, Pulgas, and Crystal Springs Bypass Tunnels.

Five major pipelines north of Crystal Springs to San Francisco.

Four pump stations.

Millbrae Corporation Yard.

Sunol Headquarters for Alameda Division.

Personnel Resources

Salaries	35
Crafts	72
Total	107

1975-76 Operating Results

The City's craft workers strike in April and May of 1976 created many operation problems for the Department, especially when the Hetch Hetchy Aqueduct was shutdown for thirty-seven day.

During the Hetch Hetchy shutdown, the Sunol Water Treatment Plant treated 140 million gallons in a 24-hour period to keep customers east of Crystal Springs in service. The capacity of the Sunol Plant was doubled by a just completed expansion project. Without the added capacity many communities served by the Bay Division pipelines would have had to ration water.

1975-76 was a record drought year. Normal runoff into the Department's five Bay Area impoundment reservoirs amounted to 18 to 19 billion gallons; the runoff was just 2 billion gallons.

With the storage in the local reservoirs projected at one-third capacity at the end of September and the record low runoff into Hetch Hetchy in the Sierras, both the Water Department and Hetch Hetchy have instituted programs to augment the Hetch Hetchy draft with water from Cherry Reservoir in case we have another dry year.

Vandalism and trespassing on watershed lands are increasing problems. The number of trespassers evicted during the year runs into the thousands.

Twelve large leaks in transmission pipelines were repaired during the year.

The number of meters tested and calibrated during the year was 162. These are the large size meters on resale services.

The work of the suburban divisions is connected with the operations and maintenance of the following listed facilities and equipment:

62,000 acres of watershed and other lands. Vandalism and trespassing are increasing every year.

185 miles of all weather roads. These are mostly gravel roads requiring periodic grading and reestablishment of drainage ditches, etc.

63 miles of property fences. Fences are periodically checked; broken or missing fences are repaired or replaced.

Over 100 miles of lease boundary fencing. Fence materials are furnished by San Francisco Water Department; installations and maintenance by lessee.

Nearly 100 miles of fire roads are maintained on the watersheds.

Ground and landscape maintenance is supplied for Peninsula and Alameda Yards, public areas of Sunol and Pulgas Water Temples, two filtration plants, pump stations, balancing reservoirs, and other areas.

140 miles of pipeline right-of-ways requires surveillance, trash removal, and fire-guarding.

229 miles of transmission pipelines, sizes up to 96 inches in diameter.

19.5 miles of water tunnels.

10 miles of wooden pipeline trestles.

3,870 ft. of long steel bridge carrying pipelines across San Francisco Bay requires periodic structural repairs and touch up painting.

16 water wells in Pleasanton area. (Maintenance & Operations.)

35 buildings.(Maintenance & Repairs.)

20 watershed keeper's cottages.(Maintenance & Repairs.)

132 motor vehicles and operating equipment.(Maintenance & Repairs.)

8 reservoir boats. (Maintenance & Operations.)

Approximately one-thousand water services; new installations, meter reading. (Maintenance & Repairs.)

17 major valve lots. (Maintenance & Operations.)

WATER QUALITY AND TREATMENT

WATER QUALITY DIVISION

Responsibilities and Functions

To insure the safety and purity of the water delivered to consumers by applying the necessary treatment and by employing a systematic program of sampling and testing to verify compliance with State and Federal Standards.

The division also has the responsibility for the Department's radio communication and security.

Major Facilities

A. Division Headquarters and Laboratory - Millbrae Yard

B. Sunol Valley Water Treatment Plant - 80 MGD Capacity

C. San Andreas Water Treatment Plant - 40 MGD Capacity

D. Various Chlorination, Fluoridation, Turbidity Control, and Lime treatment stations.

Personnel Resources

43 Employees

Fiscal Year Operating Results

Sunol Valley Water Treatment Plant	1974-75	1975-76
Volume water treated	9,170 MG	19,746 MG
Chemicals used:		
Chlorine	218,021 lbs.	368,497 lbs.
Alum	146,742 lbs.	418,655 lbs.
Lime	336,146 lbs.	623,318 lbs.
Others	4,146 lbs.	7,152 lbs.
San Andreas Water Treatment Plant		
Volume water treated	18,618 MG	19,670 MG
Chemicals Used:		
Chlorine	113,480 lbs.	100,010 lbs.
Alum	159,689 lbs.	188,217 lbs.
Sodium Hydroxide	390,337 lbs.	487,463 lbs.
Others	71,483 lbs.	42,866 lbs.

Chlorination Stations	Chlorine Used (lbs.)	
	1974-75	1975-76
Hetch Hetchy Aqueduct (Tesla Portal)	1,178,048	1,088,557
Sunol Aqueduct	15,789	6,577
Peninsula Aqueducts (four stations)	401,226	392,010
City Distribution (ten stations)	41,993	32,099

Hypochlorination Station

5 Hetch Hetchy Mountain and 2 Bay Area Locations used total of 1,568 gals. 14% Sodium Hypochlorite solution. (1250 gallons used in fiscal year 1974-75).

New Mains Disinfected	1974-75	1975-76
	38,210 L.F.	38,755 L.F.

Fluoridation

Fluoridated water is served only to consumers north of Crystal Springs and the City.

Fluoride treatment is applied at four fluoride stations and at the San Andreas Water Treatment Plant.

	1974-75	1975-76
Water treated	61,370 MG	58,131 MG
Hydrofluosilic acid used	1,539,340 lbs.	996,870 lbs.
Sodium Silicofluoride used	186,250 lbs.	185,960 lbs.

Corrosion Control Hetch Hetchy Aqueduct

To neutralize the corrosive action of the extremely soft Hetch Hetchy water, lime is added at the Rock River Lime Plant.

	1974-75	1975-76
Volume of water treated:	80,628 MG	70,240 MG
Lime Used:	3,116,622 lbs.	2,690,757 lbs.

Reservoir Turbidity Control

Three alum treatment installations used 5,400 gallons of alum to control the runoff turbidity into Crystal Springs and San Andreas Reservoirs. Because of the drought, very little alum was used during the year. By comparison, 200,000 gallons of alum was used in 1974-75.

Reservoirs Algae Control

The five Bay Area Reservoirs were treated with a total of 13,200 lbs. of copper sulfate to control aquatic growth. In fiscal year 1974-75 69,300 lbs. were used.

Sampling and Testing

During the year thousands of water samples taken from reservoirs, transmission pipelines, and the City's distribution system

The Millbrae laboratory performed the following number of tests:

	1974-75	1975-76
Chemical	31,006	35,102
Microbiological	26,444	26,311
Physical	18,200	26,007

WATER QUALITY AND OPERATIONS DATA

Water quality and operations statistics for the year are presented hereafter in the following order:

Chlorination Stations
Fluoridation Station
Lime Treatment Station
Alum Treatment Station
Copper Sulfate Treatment of Storage Reservoirs
(Tables for Bacteriological and Mineral Analyses may be found in the Miscellaneous Statistics section).

OPERATION OF CHLORINE STATIONS

1975-1976

LOCATION		TOTAL OPERATING TIME (MONTHS)	CHLORINE USED (lbs.)	
Division	Station		Station Total	Division Total
H.H.W.S.	Tesla Portal	11	1088557	1088557
Alameda	Calaveras	2.3	27026	
	Sunol Aqueduct	12	6577	
	Sunol Valley W.T.P.	11.3	368497	402100
Peninsula	Sunset Supply Line	7.4	103328	
	Crystal Springs No. 2	7.8	112925	
	San Andreas No. 2	10.5	89973	
	San Andreas No. 3	10.5	85784	
	San Andreas W.T.P.	12	100010	491930
City Distribution	College Hill	12	4207	
	Lombard	12	984	
	McLaren Pump	12	1063	
	Merced Manor	12	2490	
	Stanford Heights	12	846	
	Summit	12	345	
	Sunset	12	8818	
	Sutro	12	1124	
	University Mound North	12	764	
	University Mound South	12	11458	32099
		Total Chlorine Gas Used		2,014,686
		Plus Total Chlorine as NaOCL		1,881
		Total Chlorine Used		2,016,567

OPERATION OF FLUORIDE STATIONS

1975-1976

STATION	MONTHS OPERATED	FLOW (m.g.)	FLUORIDE USED		TOTAL FLUORIDE ADDED (mg/l)	TOTAL FLUORIDE (mg/l)
			Na_2SiF_6 (lbs.)	H_2SiF_6 (lbs.)		
SSL	6.7	8586.34	91293		0.77	
CS #2	6.7	8426.84	94667		0.81	
CSBP	9.5	21447.36		928667	0.96	
SAFP	9.6	19670.29		682043	0.81	
TOTALS	32.5	58130.83	185960	996870	0.86	

OPERATION OF LIME TREATMENT STATION

1975-1976

STATION	MONTHS OPERATED	LIME USED (lbs.)	FLOW (m.g.)	LIME ADDED	
				lbs./m.g.	mg/l
ROCK RIVER	11	2690757	70240.4	38.3	4.6

OPERATION OF ALUM TREATMENT STATIONS

1975-1976

STATION	GALLONS	ALUM USED		REMARKS
		$AL_2(SO_4)_3$	AL_2O_3	
SAWYER CAMP PLANTS	2000	None	None	
STONE CIRCLE	3400	None	None	
TOTALS	5400	None	None	

COPPER SULFATE USAGE

1975-1976

RESERVOIR	DATE	AMOUNT $CuSO_4$ (LBS.)	STORAGE (m.g.)	ORGANISM(S) NECESSITATING TREATMENT
Calaveras	Feb. '76	4400		Aphan, Fragilaria
San Antonio	Feb. '76	2000		Fragilaria, Asteronella
Upper C.S.				
Lower C.S.	Nov. '75	5400		Ceratium
San Andreas				
Pilarcitos	Sept. '75	1400		Mallemonas, Melosira
Stone Dam				
TOTALS:		13,200		
Priest				
Moccasin				
Skyline Quarry	Aug. '75	30		Chara

CONTRACTS

CONSTRUCTION CONTRACTS

The Water Department's Capital Improvement Program for 1975-76 included 31 formal construction projects with a combined value of about 13 million dollars.

No. Of Contracts	Description	Total Value of Contracts
7	Additions and Betterments to supply, transmission, treatment and miscellaneous facilities	$ 5,156,864
5	Reconstruction and Replacement of Water Facilities	442,022
1	Bond Fund Projects	4,756,970
18	City Distribution Division-Replacements and Additions	2,251,359
2	City Distribution Division-replacements and additions-incorporated in Department of Public Works contracts	-
	TOTAL	$12,607,215

17 new contracts and 14 formal contracts carried over from 1974-75.

26 projects were completed during 1975-76, 3 contracts were still under construction, and 2 projects were not yet started on June 30,1976.

The total amount of money spent on contracts during 1975-76 was $3,473,862 (amount includes engineering and inspection cost items in cast iron main contracts).

CONTRACT DATA 1975-76

Contract No.	Title of Contract	Division	Number of Bidders	Contractor	Date of Award	Date of Completion	% Complete 6/30/76	Bid Price	Total Cost to 6/30/76
1510	Constr. of Sunol Valley Water Filtration Plant Enlargement	Alameda	5	Dan Caputo Co.	1-8-75		99.9	$4,756,970.00	$4,272,611.22
1550	Crystal Springs Balancing Reservoir & Pumping Station	Peninsula	12	Stolte, Inc.	7-25-72	7-16-75	100	4,614,810.00	4,664,325.57
1600	Constr. of Centralized Data Acquisition & Control System for the City Distribution System	C.D.D.	7	L.F.E. Control System Industries	2-27-73	3-21-75 (Note-1)	100	322,905.00	322,905.00
1618	Constr. of Fences on W.D. Properties in San Mateo County	Peninsula	4	Anchor Post Products, Inc.	8-12-75	12-22-75	100	17,084.60	16,609.33
1642	Cutting in 42" Butterfly Valve at Junipero Serra Blvd. & Holloway Ave.	General	6	Underground Constr. Co.,Inc.	2-25-75	9-29-75	100	47,357.00	48,350.20
1649	Excavation & Repaving for Water Service Trenches	C.D.D.	3	Bepco, Inc.	4-22-75	7-25-75	100	61,093.00	57,438.70
1654	16" D.I. Main Installation in Scott St. bet. Pacific Ave. & Filbert Street	C.D.D.	7	McGuire & Hester	6-24-75	10-22-75	100	124,651.00	134,277.60

CONTRACT DATA 1975-76

Contract No.	Title of Contract	Division	Number of Bidders	Contractor	Date of Award	Date of Completion	% Complete 6/30/76	Bid Price	Total Cost to 6/30/76
1657	Ground Fault Detection & Protective Relays at San Antonio & Sunol Pump Stations	Alameda	1	Anderson Elec. Co.	11-26-74	2-5-76	100	$ 14,681.00	$ 15,624.00
1659	Laying of 8" D.I. Main in Stevenson St. bet. 3rd & 4th Streets	C.D.D.	5	Dalton Constr. Co.	6-24-75	10-6-75	100	85,505.00	80,245.60
1663	Central Pump Station - Central Pumps Discharge to Sutro Pipeline Cross Connection	C.D.D.	5	McCrary Constr. Co.	6-24-75	1-30-76	100	19,000.00	22,285.00
1664	Paving Various Access Roads in San Mateo County	Peninsula	6	Anza Engrg. Co.	9-10-75	11-6-75	100	8,395.00	7,320.20
1666	Remedial Roof Work - Central Pumping Sta.	C.D.D.	5	Wm. McIntosh & Son	9-10-74	8-11-75	100	38,003.00	39,222.12
1669	Laying of 8" D.I. Main in Sutter & Powell Streets	C.D.D.	6	Shaw Constr. Co.	4-8-75	8-27-75	100	82,354.00	79,979.90
1670	Cement Mortar Line 24", 20" & 8" Pipe in Howard, So. Van Ness, Sanchez & Other Streets	C.D.D.	2	Ameron, Inc.	1-7-75		99	230,960.00	177,564.60
1672	Laying of 6" & 8" D.I. Pipe in Lafayette & Main St.	C.D.D.	4	M.G.M. Constr. Co.	8-12-75	11-20-75	100	78,645.50	77,387.70

CONTRACT DATA 1975-76

Contract No.	Title of Contract	Division	Number of Bidders	Contractor	Date of Award	Date of Completion	% Complete 6/30/76	Bid Price	Total Cost to 6/30/76
1674	Laying of 4" & 6" D.I. Main in Water, Jones, Shannon & Kearny Sts.	C.D.D.	7	Rosas Constr. Co.	9-23-75	3-8-76	100	$ 93,150.00	$ 93,118.78
1675	Bernal Heights Hydro-pneumatic Pumping Station Renovation	C.D.D.	7	E. H. Morrill Co.	7-29-75		95	49,500.00	41,026.50
1677	Improvements to Shop Facilities	General	7	Valentine Corp.	6-8-76			88,611.00	-
1678	12" D.I. Main Installation in 15th Ave. bet. California & 220 Ft. North of Lake St.	C.D.D.	6	W.L. Fairey	4-22-75	7-15-75	100	57,506.00	54,12035
1681	DPW Contract						100		32,103.00
1682	Annual Paving Contract - Fiscal Year Ending 6-30-76	C.D.D.	1	Pacific Pavements Co.Ltd.	5-13-75	6-30-76	100	684,950.00	571,677.30
1683	Excavation & Repaving for Water Service Trenches	C.D.D.	2	Lowrie Paving Co.	8-12-75	11-5-75	100	93,365.00	91,456.25
1684	Excavation & Repaving for Water Service Trenches	C.D.D.	4	Depco, Inc.	9-23-75	1-14-76	100	92,485.00	90,779.75
1685	Excavation & Repaving for Water Service Trenches	C.D.D.	3	Lowrie Paving Co.	12-9-75	3-19-76	100	99,647.00	101,821.58

CONTRACT DATA 1975-76

Contract No.	Title of Contract	Division	Number of Bidders	Contractor	Date of Award	Date of Completion	% Complete 6/30/76	Bid Price	Total Cost to 6/30/76
1686	Excavation & Repaving for Water Service Trenches	C.D.D.	3	Bepco, Inc.	1-13-76	6-23-76	100	$ 101,345.00	$ 107,022.08
1687	DPW Contract								
1688	Laying of 12" D.I. Mains in 19th & 20th Sts.	C.D.D.	5	Lowrie Paving Co.	9-23-75	1-14-76	100	134,094.00	135,636.90
1689	8" D.I. Main Installa- in Divisadero St. & Duboce Ave.	C.D.D.	6	Dalton Constr. Co.	10-28-75	2-24-76	100	38,136.00	41,103.50
1694	Cement Mortar Line 20" Main - Sloat Blvd. and 44th Ave.	C.D.D.	3	Ameron, Inc.	2-24-76	6-25-76	100	147,580.00	139,955.60
1695	4" & 6" D.I. Main Inst- allation in Washington, Filbert & Leavenworth Sts.	C.D.D.	5	Dalton Constr. Co.	3-9-76	6-29-76	100	68,149.00	65,622.25
1696	Laying of 6" & 8" D.I. Main in Pacific Ave. & Powell St.	C.D.D.	8	Pat Kennelly	12-9-75	3-11-76	100	64,015.00	69,115.36
1697	16" D.I. Main Installa- tion in Filbert St. bet. Gough & Scott Sts.	C.D.D.	7	Underground Constr. Co.	3-9-76		25	213,246.50	30,663.27
1698	Laying of 8" D.I. Main in Sutter St. bet. Larkin & Jones Sts.	C.D.D.	7	Underground Constr. Co.	1-13-76	6-24-76	100	78,512.50	76,576.70
1699	DPW Contract								

Notes:

(1) Final Payment for Contract WD-1600 was approved by Public Utilities Commission on July 29, 1975.

PROFESSIONAL SERVICES CONTRACTS

During the year 11 Professional Services Agreements were made with private consulting firms. This type of agreement is used for the performance of work that requires specialized experience and personnel.

Professional services contracts and agreements for the fiscal year were as follows:

1. Waste Water Survey - The Pitometer Associates.

2. Recreational and Environmental Planning Services, Peninsula Watershed Lands - EDAW, Inc.

3. Plans, Specifications and Consulting Services During Construction of Addition to Sunol Valley Water Filtration Plant - Brown & Caldwell - Montgomery.

4. Plans, Specifications and Consulting Services During Construction of Balacing Reservoir for Crystal Springs By-pass Tunnel and Appurtenant Pumping Station - Brown & Caldwell - Montgomery.

5. Design of a Centralized Data Acquisition and Control System - Brown & Caldwell.

6. Inspection and study of Earthquake stability of Crystal Springs Dam - W.A. Wahler & Associates in Association with Lindvall, Richler & Associates and Group Ten Systems.

7. Crystal Springs Pump Station - Corrosion Engineering and Research Company.

8. Crystal Springs Pump Station - L.K. Comstock Engineering Co., Inc.

9. Main Electrical System - Electro - Test, Inc.

10. Maintenance Agreement - LFE Control System Industries

11. Slide Investigation (Millbrae Meadows) - Dames and Moove

LAND, LEASES, PERMITS

AND

PROPERTY TAXES

LAND, LEASES, PERMITS AND TAXES

Land Transactions:

At the beginning of the fiscal year the Department owned a total of 62,284.59 acres of land. Sales during the year resulted in a net decrease in holdings of 19.63 acres, leaving a new total of 62,269.96 acres.

	PURCHASES (Acres)	SALES (Acres)
Purchases:	0	
Sales:		
Parcel 3 San Mateo County at County Line		0.047
Condemnation Action: San Mateo 280-Ralston Ave. Interchange		19.583
	0	19.630
Net Decrease in Acres		19.630

Leases:

During the year there were 24 new and renegotiated leases.

51	Agricultural leases
31	Others
82	Total Current Leases

Permits:

Sixty-eight revocable permits were issued and 16 revocable were cancelled.

31	Homeowners
4	Organizations
12	Governmental Agencies
14	Commercial
3	Utility Companies
4	Temporary
68	Total Permits

Land and Agriculture:

1975-76

Miscellaneous Receipts from Rentals	$ 911,765
Walnuts	8,527
Total Receipts	$ 920,292

Taxes

The Department paid total property taxes in other counties as follows:

Alameda County	$ 862,791
Santa Clara County	181,152
San Mateo County	585,319
Total Taxes paid in other counties	$1,629,262

WATER RIGHTS - ALAMEDA COUNTY

WATER RIGHTS - ALAMEDA CREEK

In accordance with the 1916 and subsequent 1936 and other Alameda County Water District Agreements, the Department released water for replenishment of the underground supply of the Niles Cone. The total release entering Niles Cone during 1975-76 was 691.882 million gallons.

The quantities of water due the District and the quantities released by the Water Department to the District for replenishing the underground Water for each of the past ten years are as follows:

YEAR	DUE THE DISTRICT	RELEASED TO DISTRICT
1966-67	42,363,000 Gallons	1,885,672,000 Gallons
1967-68	265,512,000 "	1,541,678,000 "
1968-69	120,938,000 "	1,762,598,000 "
1969-70	78,683,000 "	1,529,317,000 "
1970-71	468,548,000 "	1,674,187,000 "
1971-72	None "	1,262,560,000 "
1972-73	189,533,000 "	683,516,000 "
1973-74	790,327,000 "	1,418,714,000 "
1974-75	254,610,000 "	1,430,995,000 "
1975-76	None "	691,882,000 "

The net accumulated advance release to the Alameda County Water District since 1935 in accordance with the terms of the 1936 Agreement amount to the 46,406 million gallons reported as of June 30, 1976.

The Sheriff of Alameda County continued to use the U. S. Navy's "Camp Shoemaker" as "Santa Rita Rehabilitation Center" during the fiscal year. Water supplied to this institution, as well as to the former Naval Housing Project, Komandorski Village and Camp Parks, was taken by the U. S. Government from the 4.105 acre tract within the Pleasanton Township County Water District. The withdrawal of ground waters for such purposes varied from a high of 2.14 million gallons to a low of 0.04 million gallons per day on days when they pumped. The pumps operated throughout the year three to seven days per week, averaging 733,167 gallons per day for the year.

During the fiscal year, the tenants on the City's Well Field property near Pleasanton pumped about 134 million gallons of water from City owned wells for irrigation of this leased property.

During this fiscal year, the lessees on Department lands bordering Laguna and Alameda Creeks at Sunol used for irrigation about 133 million gallons of water pumped directly from these creeks.

FINANCIAL STATEMENTS

ACCOUNTING AND AUDITING

The accounts of the San Francisco Water Department are maintained strictly in accordance with the requirements of the California State Public Utilities Commission and Section 64 of the City Charter. The accounts of the Department have been so coordinated with the Controller's system that no encumbrance or expenditure against budget estimates can be incurred without prior certification from the Controller that funds are available. As provided in Ordinance 9.0621, an annual audit of the Department is made as of June 30 by a firm of certified public accountants.

1975-76 Operating Expenses show a net increase of $869,577.99 as shown by the following tabulation:

Operating Revenue Deductions

	Increase	Decrease
Source of Supply	$ 83,519.05	
Pumping Expenses	105,048.94	
Purification Expenses	124,151.95	
Transmission and Distributions Expenses		$363,062.97
Customers Accounts Expenses		75,120.75
Administrative and General	553,348.56	
*Municipal Taxes, Comparison	264,745.26	
Miscellaneous Expenses	18,195.88	
Taxes Actual	133,375.07	
Provision for Depreciation	25,377.00	
Standby Charge & Purchase of Water	-0-	
		$438,183.72
Net Increase		869,577.99
TOTALS	$1,307,761.71	$1,307,761.71

*Water delivered to Municipal Departments offset by taxes.

An analysis of Revenue and Operating Expenses is shown in the following Exhibits "A" through "E".

PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT

EXHIBIT "A"
JUNE 30, 1976

ASSETS AND OTHER DEBITS

UTILITY PLANT			
Water Plant in Service		$234,185,493.00	
Less Reserve for Depreciation		72,482,576.00	$161,702,917.00
Construction Work in Progess:			
Water Department		$ 1,481,179.49	
1961 Bond Fund		377,006.62	
1972 Bond Fund		6,337,730.59	8,195,916.70
TOTAL AND ACCRUED ASSETS			$169,898,833.70
CURRENT AND ACCRUED ASSETS			
Cash (See Schedule 1)		$ 17,903,282.35	
Accounts Receivable- (See Schedule 2)	$3,089,519.96		
Less Reserve for Uncollectible-Acct.	58,000.00	3,031,519.96	
Notes Receivable		7,366.58	
Interfund Accounts Receivable (See Schedule 3)		371,800.90	
Materials and Supplies		961,335.53	22,275,305.32
TOTAL CURRENT AND ACCRUED ASSETS			
DEFERRED DEBITS			
Work in Progress		$385,468.13	
Suspense Debits (See Schedule 4)		327,549.12	
Encumbrances (Contra)		-0-	
Budget Allocations to other Depts. (See Schedule 10)		-0-	
TOTAL DEFERRED DEBITS			713,017.30
TOTAL ASSETS AND OTHER DEBITS			$ 192,887,156.32

LIABILITIES AND OTHER CREDITS

LONG TERM DEBT		
Bonds - (See Schedule 5)		$39,077,740.00
CURRENT AND ACCRUED LIABILITIES		
Customer's Deposits	$ 55,172.10	
Accounts Payable - (See Schedule 6)	2,301,094.63	
Interfund Accounts Payable - (See Schedule 7)	6,023,551.85	
Matured Long-Term Debt - 1928 Bond	3,000.00	
Matured Interest - 1972 Bond	43,262.50	
Interest Accrued - 1923 Bond	-0-	
TOTAL CURRENT AND ACCRUED LIABILITIES		8,426,081.08
DEFERRED CREDITS		
Suspense Credits	$ 32,253.25	
Advance of Construction	83,849.62	
Orders for Work - Cash Advances	131,433.49	
Orders for Work - Accounts Receivable	-0-	
Orders for Work - Other Departments	-0-	
Orders for Work - Stock Manufacture	-0-	
Rental Deposits and Payments made in advance	64,005.00	
Utility Tax Billed	(169.90)	
Sewer Service Charges Billed	8,322.91	
Industrial Waste Fee - Billed	(5,483.48)	
TOTAL DEFERRED CREDITS		314,210.89
RESERVES		
Injuries and Damage Reserves	$ 825,000.00	
Reserve for Refunds:		
Funded		
Unfunded		
Reserve for Contractors Damage Claims	20,401.13	
Reserve for Encumbrances (Contra)	-0-	
TOTAL RESERVES		845,401.13
CONTRIBUTIONS IN AID OF CONSTRUCTION		(545.00)
NET CAPITAL INVESTMENT		
(See Detail on Sheet 2)		144,224,268.22
TOTAL LIABILITIES AND OTHER CREDITS		$192,887,156.32

PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT

EXHIBIT "B"
JUNE 30, 1976

	1972 M.W.S. BOND FUND	1961 M.W.S. BOND FUND	SAN FRANCISCO WATER DEPARTMENT	TOTAL
NET CAPITAL INVESTMENT - JUNE 30, 1975	$ 12,188,415.50	$ (2,599,929.05)	$129,917,111.48	$139,505,597.93
ADD:				
ADJUSTMENT OF PRIOR YEARS SURPLUS			(98,462.16)	(98,462.16)
Bond Sold (SeriesA)			4,613,600.45	4,613,600.45
Net Income for 12 Months ending June 30, 1976			698,972.22	711,662.99
Completed Contracts Capitalized,	12,690.77		29,002.97	71,750.00
Equipment Transfer	42,747.03			795,370.00
Interest Capitalized by Bond Fund	795,370.00			
Prepaid Interest on Series "A"			967,405.94	967,405.94
Transfer to Completed Contracts				
	$ 13,039,223.30	$ (2,599,929.05)	$136,127,630.90	$146,566,925.15
DEDUCT:				
Book Value of Plant Appraisal - June 30, 1968			$ 1,762,775.94	$ 1,762,775.94
Interest Capitalized by Bond Fund				
Bond Sold (Series "A")				
Completed Contracts Capitalized	119,291.78	362,739.36	12,690.77	494,721.91
Equipment Transfer	29,002.97		56,156.11	85,159.08
Cancellation of Capitalizing Contract Shown Above				
Allocated to General Fund				
Prepaid Interest on Series "A"				
NET CAPITAL INVESTMENT - JUNE 30, 1976	$ 12,890,928.55	$ (2,962,668.41)	$134,296,008.08	$144,224,268.22

COMPOSITION OF NET CAPITAL INVESTMENT

INITIAL CAPITAL INVESTMENT - MARCH 03, 1930				
Amortization of Allocations (Spring Valley)		$ 4,152,652.24		
Valuation of Municipal Water Works		100,000.00		
		$ 4,252,652.24		
LESS:				
Additional allowance for Depreciation - March 1, 1920 to March 3, 1930		2,327,916.67	$ 1,924,735.57	
ADDITIONS:				
Net Income - March 3, 1930 to June 30, 1976		$158,810,020.52		
Miscellaneous and year to year adjustment		6,543,047.13		
Allocations from Hetch Hetchy Power Division		409,471.41		
Allocations from 1947 Hetch Hetchy Water Bond Fund		290,516.71	166,053,055.77	
Grant earned on Federal Public Works Project			2,358,987.60	
Book Value of Plant Appraisal - June 30, 1948			83,364.03	$170,420,642.97
DEDUCTIONS:				
Allocated to General Fund			$ 19,172,457.24	
Allocated to Hetch Hetchy Water Supply			4,466,014.40	
Lands allocated to City and County of San Francisco for Streets and/or Blvds			172,564.67	
Excess of adjusted book value of plant appraisal December 31, 1937	$ 1,990,474.91			
Excess of adjusted book value of plant appraisal, June 30, 1953	188,291.42	$ 2,178,766.33		
Book Value of Plant appraisal, June 30, 1958		89,383.93		
Book Value of Plant appraisal, June 30, 1963		91,365.18		
Book Value of Plant appraisal, June 30, 1968		25,823.00	2,385,338.44	26,196,374.75
NET CAPITAL INVESTMENT - JUNE 30, 1976				$144,224,268.22

PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT

EXHIBIT "C"
COMPARATIVE INCOME STATEMENT
TWELVE MONTHS ENDING - JUNE 30, 1976

TITLE	FISCAL YEAR 1975 - 1976	FISCAL YEAR 1974 - 1975	1975 - 1976 INCREASE (DECREASE)	MARCH 03, 1930 TO JUNE 30, 1976
OPERATING INCOME				
Sale of Water	$ 33,231,582.55	$ 29,201,899.31	$ 4,029,683.24	$663,334,894.50
OPERATING REVENUES DEDUCTIONS				
Operating Expenses	$ 17,290,485.19	$ 16,579,659.27	$ 710,825.92	$254,863,674.71
Purchase of Water	6,500,000.00	6,500,000.00	-0-	131,546,061.92
Depreciation	3,627,973.00	3,602,596.00	25,377.00	70,323,076.46
Taxes - Actual	1,656,551.47	1,523,176.40	133,375.07	33,022,831.42
TOTAL OPERATING REVENUE DEDUCTIONS	$ 29,075,009.66	$ 28,205,431.67	$ 869,577.99	$490,055,644.51
UTILITY OPERATING INCOME	$ 4,156,572.89	$ 996,467.64	$ 3,160,105.25	$173,279,249.99
OTHER INCOME	1,811,422.22	1,551,991.19	259,431.03	42,497,321.41
GROSS INCOME	$ 5,967,995.11	$ 2,548,458.83	$ 3,419,536.28	$215,776,571.40
INCOME DEDUCTIONS	1,354,394.66	1,206,511.76	147,882.90	56,966,550.63
INCOME TRANSFERRED TO NET CAPITAL INVESTMENT	$ 4,613,600.45	$ 1,341,947.07	$ 3,271,653.38	$158,810,020.52

House Rent	$ 1,615.87
Rents-Including Share Crops.	795,667.32
Contractor's Damage Claims	(1,267.08)
Interest Revenue	173,821.18
Turn-on Fees	6,788.00
Fixed Asset Sales	427,997.20
Miscellaneous	398,063.15
Walnut Orchard	8,736.58
TOTAL OTHER INCOME	$1,811,422.22
Non-Operating Revenue Deductions	170,047.64
Interest on Long-Term Debt	$1,184,347.02
TOTAL INCOME DEDUCTIONS	$1,354,394.66

SAN FRANCISCO WATER DEPARTMENT

EXHIBIT "E"
COMPARATIVE INCOME STATEMENT
JUNE 30, 1976

TITLE		FISCAL YEAR 1975 - 1976	FISCAL YEAR 1974 - 1975	1975 - 1976 INCREASE (DECREASE)	MARCH 3, 1930 TO JUNE 30, 1976
OPERATING INCOME					
SALE OF WATER:					
Water Sales - San Francisco		$ 14,598,664.79	$ 13,177,261.80	$ 1,421,402.99	
Water Sales - Outside San Francisco		16,646,756.45	14,318,416.88	2,328,339.57	
Water Sales - Municipal Departments		138,258.83	123,063.41	15,195.42	
Water Sales - Municipal Departments		1,847,902.48	1,583,157.22	264,745.26	
TOTAL WATER SALES		$ 33,231,582.55	$ 29,201,899.31	$ 4,029,683.24	$663,334,894.50
OPERATING REVENUE DEDUCTIONS					
SOURCE OF SUPPLY:					
Operation, Supervision and Engineering	701	25,449.20	26,083.74	(634.54)	
Operation, Labor and Expense	702	968,364.43	954,507.82	13,856.61	
Miscellaneous Expenses	703	890.42	245.28	645.14	
Maintenance, Supervision and Engineering	706	10,138.29	293.26	9,845.03	
Maintenance of Structure and Improvements	707	73,895.10	57,552.31	16,342.79	
Maintenance of Collection and Impounding Reservoirs	708	398,812.81	345,716.90	53,095.91	
Maintenance of Lake, River and Other Intakes	709	1,008.26	3,702.82	(2,694.56)	
Maintenance of Springs and Tunnels	710	3,034.18	290.20	2,743.98	
Maintenance of Wells	711	485.43	705.49	(220.06)	
Maintenance of Supply Mains	712	134,123.62	143,745.51	(9,621.89)	
Maintenance of Other source of Supply Plant	713	214.65	2.50	212.15	
Hydrography	718	4,365.28	4,416.79	(51.51)	
TOTAL SOURCE OF SUPPLY EXPENSES		$ 1,620,781.67	$ 1,537,262.62	$ 83,519.05	$ 27,976,398.40
PUMPING EXPENSES					
Pumping Labor and Expenses	724	$ 354,787.89	$ 227,346.38	$ 127,441.51	
Miscellaneous Supplies and Expenses	725	1,765.97	1,647.08	118.89	
Fuel or Power Purchased for Pumping	726	230,399.41	274,784.28	(44,384.87)	
Maintenance, Supervision and Engineering	729	2,568.72	.80	2,567.92	
Maintenance of Structures and Improvements	730	11,871.90	17,677.58	(5,805.68)	
Maintenance of Primary Pumping Equipment	731	803.78	11,918.36	(11,114.58)	
Maintenance of Pumping Equipment	732	108,020.53	70,970.87	37,049.66	
Gardening	734	6,222.56	7,046.47	(823.91)	
TOTAL PUMPING EXPENSES		$ 716,440.76	$ 611,391.82	$ 105,048.94	$ 16,843,105.37
PURIFICATION EXPENSE ACCOUNTS					
Operation, Supervision and Engineering	741	$ 88,780.61	$ 76,960.55	$ 11,820.06	
Operation, Labor, and Expenses	742	1,049,670.74	1,056,617.07	(6,946.33)	
Miscellaneous Expenses	743	2,361.43	1,659.85	701.58	
Supplies and Expenses	744	514,740.52	386,959.35	127,781.17	
Maintenance, Supervision and Engineering	746	-0-	-0-	-0-	
Maintenance of Structures and Improvements	747	56,320.38	53,351.02	2,969.36	
Maintenance of Water Treatment Equipment	748	9,261.77	21,435.66	(12,173.89)	
TOTAL PURIFICATION EXPENSES		$ 1,721,135.45	$ 1,596,983.50	$ 124,151.95	$ 16,524,656.26

PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT

EXHIBIT "B" (CONT'D)
COMPARATIVE INCOME STATEMENT
JUNE 30, 1976

TITLE		FISCAL YEAR 1975 - 1976	FISCAL YEAR 1974 - 1975	1975 - 1976 INCREASE (DECREASE)	MARCH 3, 1930 TO JUNE 30, 1976
OPERATING REVENUE DEDUCTIONS (CONT')					
TRANSMISSION AND DISTRIBUTION ACCOUNT					
Operation, Supervision, and Engineering	751	$ 353,047.86	$ 310,800.79	$ 42,247.07	
Storage Facilities Expenses	752	2,315.62	22,590.78	(20,275.16)	
Transmission and Distribution Lines Expenses	753	224,532.93	238,474.50	(13,941.57)	
Meter Expenses	754	399,339.97	509,510.53	(110,170.56)	
Customer Installation Expenses	755	590,161.16	522,062.61	68,098.55	
Miscellaneous	756	10,915.84	28,329.70	(17,413.86)	
Operating Expenses - City Yard	757	382,861.50	437,955.43	(55,093.93)	
Maintenance, Supervision and Engineering	758	37,924.94	31,332.53	6,592.41	
Maintenance of Structures and Improvements	759	219,864.15	168,229.67	51,634.48	
Maintenance of Reservoirs and Tanks	760	61,652.73	112,193.84	(50,541.11)	
Maintenance of Transmission Lines and Canals	761	146,056.63	84,726.11	61,330.52	
Pipeline Electrolysis	762	11,153.48	438.46	10,715.02	
Maintenance of Services	763	923,356.59	1,269,146.45	(345,789.86)	
Maintenance of Miscellaneous Plant	766	258,183.10	286,480.18	(28,292.08)	
Maintenance of Distribution Mains, Canals, etc.	767	1,592,989.34	1,552,858.54	40,130.80	
Reconditioning of Salvaged Materials	768	21.59	-0-	21.59	
Recoverable Claims - Mains and Services	769	12,178.61	14,493.89	(2,315.28)	
TOTAL TRANSMISSION & DISTRIBUTION ACCOUNTS		$5,226,561.04	$5,589,624.01	$ (363,062.97)	$72,626,780.78
CUSTOMER'S ACCOUNTS EXPENSES					
Meter Reading Expenses	772	$ 194,429.81	$ 199,473.88	$ (5,044.07)	
Customer Records and Collection Expenses	773	273,186.79	237,143.07	36,043.72	
Miscellaneous Customer Accounts Expenses	774	244,286.57	254,837.25	(10,550.68)	
Inspection and Service	775	199,696.90	245,996.92	(46,300.02)	
Bookkeeping Department	776	193,282.59	229,761.42	(36,478.83)	
Shipping	777	49,506.67	62,297.54	(12,790.37)	
TOTAL CUSTOMER'S ACCOUNTS EXPENSES		$1,154,389.33	$1,229,510.08	$ (75,120.75)	$29,007,920.23
ADMINISTRATIVE AND GENERAL					
Salaries - General Officers	780	$ 47,421.90	$ 39,573.46	$ 7,848.44	
Salaries - General Office	781	324,343.78	304,951.78	19,392.00	
General Engineering	782	647,610.58	542,342.35	105,268.23	
Resources and Planning	783	69,537.31	65,473.29	4,064.02	
Office Supplies and other Expenses	784	34,552.89	41,358.05	(6,805.16)	
Telephone Service	785	128,465.21	119,787.85	8,677.36	
Mason Street Operating Expenses	786	108,876.70	112,504.53	(3,627.83)	
Municipal Taxes - Comparison	787	1,847,902.48	1,583,157.22	264,745.26	
Outside Services Employed	788	5,383.59	12,305.94	(6,922.35)	
Insurance - Compensation	789	210,649.63	219,020.07	(8,370.44)	
Insurance - Other	790	87,483.00	19,029.00	68,454.00	
Injuries and Damages	791	828,435.23	103,379.16	725,056.07	
Pensions	792	1,073,022.40	1,142,368.54	(69,346.14)	
Social Security	793	467,948.00	402,969.92	64,978.08	
Electronic Data Processing	794	191,841.67	477,555.39	(285,713.72)	
Public Utilities Commission	798	377,041.61	374,224.17	2,817.44	
Maintenance of Central Control System	804	12,030.55	-0-	12,030.55	
Maintenance to Telephone System	805	15,304.33	1,063.32	14,241.01	
Maintenance to 425 Mason Street Building	807	13,144.54	26,572.69	(13,428.15)	
Maintenance to Radio System	808	21,855.25	13,162.77	8,692.48	
Inventory Expense-Maintenance	809	(16,578.80)	(19,837.30)	3,258.50	
Maintenance of Non-Operative Property	810	1,164.90	1,099.03	65.87	
Miscellaneous Maintenance	806,811,812,813	281,557.51	378,839.21	(97,281.70)	
TOTAL ADMINISTRATION AND GENERAL EXPENSES		$6,778,994.26	$5,960,900.44	$ 818,093.82	$90,224,568.12

EXHIBIT "E" (CONT'D)
COMPARATIVE INCOME STATEMENT
JUNE 30, 1976

TITLE		FISCAL YEAR 1975 - 1976	FISCAL YEAR 1974 - 1975	1975 - 1976 INCREASE (DECREASE)	MARCH 03, 1930 TO JUNE 30, 1976
OPERATING REVENUE DEDUCTIONS (CONT'D.)					
MISCELLANEOUS EXPENSES					
Uncollectible Water Bills	814	$ 72,020.11	$ 53,137.36	$ 18,882.75	
Provision for Contingent Funds	815	-0-	1.60	(1.60)	
Undistributed Operating Expenses	817	162.57	847.84	(685.27)	
TOTAL MISCELLANEOUS EXPENSES		$ 72,182.68	$ 53,986.80	$ 18,195.88	$ 1,660,245.55
TOTAL OPERATING REVENUE DEDUCTIONS		$17,290,485.19	$16,579,659.27	$ 710,825.92	$254,863,674.71
OPERATING EXPENSES					
Purchase of Water	502.1	$ 6,500,000.00	$ 6,500,000.00	$ -0-	
Depreciation	503	3,627,973.00	3,602,596.00	25,377.00	
Taxes-Actual	507	1,656,551.47	1,523,176.40	133,375.07	
TOTAL OPERATING EXPENSES		$11,784,524.47	$11,625,772.40	$ 158,752.07	$235,191,969.80
TOTAL OPERATING REVENUE DEDUCTIONS & OPERATING EXPENSES		$29,075,009.66	$28,205,431.67	$ 869,577.99	$490,055,644.51
UTILITY OPERATING INCOME		$ 4,156,572.89	$ 996,467.64	$ 3,160,105.25	$173,279,249.99
OTHER INCOME					
Rentals, including Crops Shares	521	$ 794,400.24	$ 741,437.96	$ 52,962.28	
Walnut Orchard Sales	526	8,736.58	10,110.76	(1,374.18)	
Miscellaneous (See Schedule 10)					
Interest Earned	524	173,821.18	238,113.08	(64,291.90)	
Sales of Real Estate and Fixed Assets	526	$ 834,464.22	562,329.39	272,134.83	
TOTAL OTHER INCOME		$ 1,811,422.22	$ 1,551,991.19	$ 259,431.03	$ 42,497,321.41
GROSS INCOME		$ 5,967,995.11	$ 2,548,458.83	$ 3,419,536.28	$215,776,571.40
INCOME DEDUCTIONS					
Agricultural Division	850-854	$ 170,047.64	$ 137,074.04		
Interest on Long-Term Debt	530	1,184,347.02	1,069,437.72		
TOTAL INCOME DEDUCTIONS		$ 1,354,394.66	$ 1,206,511.76	$ 147,882.90	$ 56,966,550.88
NET INCOME TRANSFERRED TO NET CAPITAL INVESTMENT		$ 4,613,600.45	$ 1,341,947.07	$ 3,271,653.38	$158,810,020.52

BOND REDEMPTION AND INTEREST

WATER DEPARTMENT

FISCAL YEAR	REDEMPTION MUNI WATER 1961	REDEMPTION MUNI WATER 1972	REDEMPTION SYSTEM TOTAL	INTEREST MUNI WATER 1961	INTEREST MUNI WATER 1972	INTEREST SYSTEM TOTAL	TOTAL REDEMPTION PLUS INTEREST
1975-76	$ 2,691,373	$ 695,000	$ 3,386,373	$ 994,277	$ 793,847	$ 1,788,124	$ 5,174,497
1976-77	2,694,799	695,000	3,389,799	899,224	756,355	1,655,579	5,045,378
1977-78	2,694,801	695,000	3,389,801	808,353	712,430	1,520,783	4,910,584
1978-79	2,691,370	695,000	3,389,370	717,797	668,505	1,386,302	4,772,672
1979-80	2,691,374	695,000	3,386,374	627,064	626,080	1,253,144	4,639,518
1980-81	2,691,370	695,000	3,386,370	536,012	584,655	1,120,667	4,507,037
1981-82	2,691,374	695,000	3,386,374	444,737	543,230	987,967	4,374,341
1982-83	2,451,375	695,000	3,146,375	352,868	501,805	854,673	4,001,048
1983-84	1,563,397	695,000	2,258,387	268,066	460,380	728,446	2,986,843
1984-85	1,563,396	695,000	2,258,396	208,524	418,955	627,479	2,885,875
1985-86	1,477,686	695,000	2,172,686	149,899	377,530	527,429	2,700,115
1986-87	1,196,546	695,000	1,891,546	106,612	338,775	445,387	2,336,933
1987-88	586,561	695,000	1,291,561	79,394	300,020	379,414	1,670,975
1988-89	390,848	695,000	1,085,848	52,665	260,820	313,485	1,399,333
1989-90	267,423	695,000	962,423	34,124	221,370	255,494	1,217,917
1990-91	267,423	700,000	967,423	21,130	181,225	202,355	1,169,778
1991-92	119,998	700,000	819,998	8,136	140,650	148,786	968,784
1992-93	47,999	700,000	747,999	2,448	99,625	102,073	850,072
1993-94	-0-	700,000	700,000	-0-	58,250	58,250	758,250
1994-95	-0-	450,000	450,000	-0-	22,500	22,500	472,500
	$28,789,113	$13,675,000	$42,464,113	$6,314,330	$8,067,007	$14,378,337	$56,842,450
ORIGINAL AMOUNT	$47,999,000	$13,925,000					
INTEREST RATE	2 1/4 to 6%	5% to 6.5%					

MISCELLANEOUS STATISTICS

BACTERIOLOGICAL ANALYSES
ANNUAL SUMMARY OF RESULTS
RAW WATERS - SOURCES AND RESERVOIRS

1975-1976

Origin of Samples	Agar Count No. Per Ml.			Coliform Group 10 .ml. portions			Samples		
	Min.	Max.	Median	No. Exam.	No. Pos.	% Pos.	No. Exam.	No. Pos.	% Pos.
Moccasin Reservoir	30	> 300	> 300	145	108	74.5	29	22	75.9
Tesla Portal	0	25	0	240	83	34.6	48	15	31.3
Calaveras Reservoir	0	> 300	25	210	70	33.3	42	17	40.5
Calaveras Outlet	0	> 300	12	205	48	23.4	41	8	19.5
Sunol Filters	0	> 300	15	245	155	63.3	49	35	71.4
Pleasanton Well Field	0	100	0	240	2	0.8	48	0	0.0
Pleasanton Town Well	0	200	0	255	1	0.4	51	0	0.0
San Antonio Reservoir	10	> 300	100	255	118	46.3	51	24	47.1
San Antonio Outlet	0	> 300	40	255	52	20.4	51	9	17.6
Upper C.S. Reservoir	0	> 300	50	260	166	63.8	52	33	63.5
Lower C.S. Reservoir	0	> 300	50	260	129	49.6	52	28	53.8
Lower C.S. Outlet	0	> 300	50	1495	623	41.7	299	124	41.5
San Andreas Reservoir	0	> 300	10	255	116	45.5	51	21	41.2
San Andreas Outlet	0	> 300	8	1400	791	56.5	280	159	56.8
Pilarcitos Surface	0	> 300	23	260	135	51.9	52	25	48.1
Pilarcitos P.L.									
Stone Dam Surf.	0	> 300	78	250	248	99.2	50	50	100
Stone Dam Outlet	0	> 300	68	255	233	91.4	51	48	94.1
				MPN					
				Min.	Max.	Median			
Lake Merced North	0	> 300	100	2	1600	25	44	41	93.2
Lake Merced South +	0	> 300	150	6	1600	49	44	43	97.7
Laguna Creek	0	> 3000	> 3000	350	> 24000	1800	42	42	100
Alameda Creek	20	> 3000	900	34	16000	790	47	47	100

+ Emergency Standby Source
MPN: Most Probable Number of Coliform Organisms per 100 Milliters

Univ. Md. Inlet #1									
Univ. Md. Inlet #2	0	25	0	520	12	2.3	104	2	1.9
Univ. Md. Outlet #1	0	25	0	520	0	0	104	0	0
Univ. Md. Outlet #2	0	0	0	520	0	0	104	0	0
Univ. Md. System #1	0	1	0	520	0	0	104	0	0
Univ. Md. System #2	0	9	0	520	0	0	104	0	0
Univ. Md. System #3	0	100	0	510	0	0	102	0	0
Univ. Md. System #4	0	100	0	520	0	0	104	0	0
Univ. Md. System #5	0	80	0	520	0	0	104	0	0
Univ. Md. System #6	0	100	0	435	14	3.2	87	3	3.4
Univ. Md. System #7	0	1	0	520	0	0	104	0	0
Univ Md. System #8	0	300	0	520	0	0	104	0	0
College Hill Inlet	0	15	0	520	0	0	104	0	0
College Hill Outlet	0	1	0	520	0	0	104	0	0
College Hill System #1	0	50	0	510	7	1.4	102	1	1.0
College Hill System #2	0	100	0	465	0	0	93	0	0
Sunset Inlet #1	0	50	0	520	0	0	104	0	0
Sunset Outlet #1	0	3	0	440	0	0	88	0	0
Sunset Outlet #2	0	0	0	235	0	0	47	0	0
Sunset System #1	0	10	0	520	0	0	104	0	0
Sunset System #2	0	2	0	515	0	0	103	0	0
Sunset System #3	0	> 300	0	510	1	0.2	102	0	0
Sunset System #4	0	12	0	520	0	0	104	0	0
Sunset System #5	0	5	0	515	0	0	103	0	0
Sunset System #6	0	1	0	515	0	0	103	0	0
Sunset System #7	0	2	0	520	1	0.2	104	0	0
Sunset System #8	0	15	0	520	0	0	104	0	0
Sunset System #9	0	3	0	470	0	0	94	0	0
Potrero Hts. Tank	0	1	0	520	0	0	104	0	0
Potrero Hts. Res. Out.	0	100	0	470	0	0	94	0	0
Potrero Hts. System	0	> 300	0	320	0	0	64	0	0
Lombard System	0	2	0	520	2	0.4	104	0	0
Merced Manor Sys. #1	0	50	0	520	1	0.2	104	0	0
Merced Manor Sys. #2	0	1	0	520	0	0	104	0	0
Stanford Hts. Outlet	0	1	0	520	0	0	104	0	0
Stanford Hts. Sys. #1	0	3	0	520	2	0.4	104	0	0
Stanford Hts. Sys. #2	0	> 300	0	520	0	0	104	0	0
Stanford Hts. Sys. #3	0	0	0	510	0	0	102	0	0
Sutro Outlet	0	1	0	520	9	1.7	104	2	1.9
Sutro System #1	0	1	0	520	0	0	104	0	0
Sutro System #2	0	200	0	515	0	0	103	0	0
Sutro System #3	0	> 300	0	425	7	1.7	85	1	1.2
Sutro System #4	0	> 300	0	445	31	7.0	89	6	6.7
McLaren System #1	0	30	0	520	18	3.5	104	3	2.9
McLaren System #2	0	200	0	520	13	2.5	104	2	1.9
Summit Outlet	0	> 300	0	515	2	0.4	103	0	0
Summit System	0	0	0	520	5	1.0	104	0	0
Stanford Hts. Inlet	0	1	0	520	0	0	104	0	0

BACTERIOLOGICAL ANALYSES
ANNUAL SUMMARY OF RESULTS

1975-1976

Origin of Samples	Agar Count No. Per Ml.			Coliform Group 10 ml. portions			Samples		
	Min.	Max.	Median	No. Exam.	No. Pos.	% Pos.	No. Exam.	No. Pos.	% Pos.
Distribution Reservoir with chlorination facilities									
Lombard Reservoir	0	0	0	515	0	0	103	0	0
Univ. Md. Res. #1	0	100	0	520	44	8.5	104	5	4.8
Univ. Md. Res. #2	0	4	0	520	0	0	104	0	0
College Hill Res.	0	25	0	520	0	0	104	0	0
Sunser Res. #1	0	2	0	510	1	0.2	102	0	0
Sunset Res. #2	0	150	0	155	13	8.4	31	2	6.5
Merced Manor Res.	0	0	0	520	1	0.2	104	0	0
Stanford Hts. Res.	0	10	0	520	4	0.8	104	0	0
Sutro Reservoir	0	100	0	515	20	3.9	103	0	0
Summit Reservoir	0	50	0	520	51	9.8	104	5	4.8
Francisco Reservoir	0	6	0	520	26	5.0	104	5	4.8
Potrero Hts. Reservoir									
McLaren Tank	0	12	0	500	3	0.6	100	0	0
Niles Reservoir	0	> 300	0	250	0	0	50	0	0
Pulgas									
TREATED WATER									
Alameda East	0	10	0	255	0	0	51	0	0
Calaveras Pipeline	0	> 300	12	200	39	19.5	40	6	15
San Antonio Pipeline	0	> 300	55	240	52	21.7	48	9	18.8
Sunol F.P. Outlet	0	4	0	250	0	0	50	0	0
Sunol Town Supply	0	150	0	520	0	0	104	0	0
Sunol Aqueduct	0	1	0	260	0	0	52	0	0
Irvington Meter N & S	0	3	0	255	0	0	51	0	0
Bay Cross. Pipeline #1	0	20	0	1315	0	0	263	0	0
Bay Cross. Pipeline #2	0	50	0	1310	2	0.2	262	0	0
Bay Cross. Pipeline #3	0	5	0	1305	1	0.1	261	0	0
Bay Cross Pipeline #4	0	3	0	1295	0	0	259	0	0
Palo Alto Pipeline	0	25	0	785	1	0.1	157	0	0
S.S.L. Casey Quarry	0	7	0	1565	4	0.3	313	0	0
C.S. #2 Casey Quarry	0	3	0	1565	6	0.4	313	0	0
S.F. Airport North	0	150	0	1310	30	2.3	262	5	1.9
S.F. Airport South	0	> 300	0	1280	15	1.2	256	2	0.8
C.S. Pipeline #1									
C.S. Pipeline #2	0	15	0	1565	10	0.6	313	2	0.6
San Andreas #2 Inlet	0	2	0	1550	77	5.0	310	12	3.9
San Andreas #3 Inlet	0	1	0	1550	80	5.2	310	13	4.2
San And. F.P. #1 Outlet	0	35	0	1565	0	0	313	0	0
San And. F.P. #2 Outlet	0	3	0	1565	0	0	313	0	0
S.S.L. at Millbrae	0	> 300	0	1565	28	1.8	313	4	1.3
San Andreas #2 Sceden	0	200	0	1310	0	0	262	0	0

SAN FRANCISCO WATER DEPARTMENT

MINERAL ANALYSES

TABLE I

Source	A Hetch Hetchy Reservoir (surface)	B Alameda East Portal (treated water)
Date Sampled	July 29, 1976	Aug. 3, 1976
CHEMICAL CONSTITUENTS	mg/liter	mg/liter
Cations (+)		
Aluminum	0.01	0.02
Arsenic	< 0.001	< 0.001
Barium	< 0.5	< 0.5
Boron	0.007	0.008
Cadmium	< 0.001	< 0.001
Calcium	1.2	4.4
Chromium	< 0.005	< 0.005
Copper	< 0.01	< 0.01
Iron	< 0.01	< 0.01
Lead	< 0.01	< 0.01
Magnesium	0.0	0.6
Manganese	< 0.01	< 0.01
Mercury	< 0.0006	< 0.0006
Potassium	0.3	0.3
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Sodium	0.9	1.7
Zinc	0.06	0.01
Anions (-)		
Bicarbonate	6.1	9.8
Carbonate	0	2.4
Chloride	0	2
Cyanide	< 0.001	< 0.001
Fluoride	< 0.1	< 0.1
Hydroxide	0	0
Nitrate	< 0.05	< 0.05
Nitrite	< 0.001	< 0.001
Phosphate	< 0.01	< 0.01
Sulfate	0.3	1.8
Nonionics		
Total Apparent ABS	< 0.01	< 0.01
Ammonia (Albumoid NH_3)	0.02	0.02
Ammonia (Free NH_3)	< 0.01	< 0.01
Dissolved Oxygen (O_2)	8.2	10.9
Carbonic Acid (H_2CO_3)	4	8
Silica (SiO_2) (Soluble SiO_2)	3	3
Tannins & Liggins	< 0.05	< 0.05
Derived Values		
Hardness as $CaCO_3$	3	14
Alkalinity as $CaCO_3$	6	12
Total Solids		
Residue at 200°C	8	21
Physical Measurements		
Conductivity (Micromhos/CM)	14	35
pH	7.1	9.1
Turbidity (Units)	0.3	0.5
Color (Units)	0	0
Carbon Chloroform Extract (µg/l)		21.4

SAN FRANCISCO WATER DEPARTMENT

MINERAL ANALYSES

TABLE II

Source	C Calaveras Pipeline (filtered water) Aug. 4, 1976	D San Antonio Pipeline (filtered water) Aug. 6, 1976
CHEMICAL CONSTITUENTS	mg/liter	mg/liter
Cations (+)		
Aluminum	0.04	0.01
Arsenic	< 0.001	< 0.001
Barium	< 0.5	< 0.5
Boron	0.025	0.050
Cadmium	< 0.001	< 0.001
Calcium	34.5	40.5
Chromium	< 0.005	< 0.005
Copper	< 0.01	< 0.01
Iron	< 0.01	< 0.01
Lead	< 0.01	< 0.01
Magnesium	10.7	15.1
Manganese	< 0.01	< 0.01
Mercury	< 0.0006	< 0.0006
Potassium	2	2
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Sodium	11.0	17.1
Zinc	0.02	0.03
Anions (-)		
Bicarbonate	146.4	155.0
Carbonate	0.0	9.6
Chloride	10	19
Cyanide	< 0.001	< 0.001
Fluoride	0.1	0.1
Hydroxide	0	0
Nitrate	< 0.05	< 0.05
Nitrite	< 0.001	< 0.001
Phosphate	0.04	0.05
Sulfate	21.2	31.9
Nonionics		
Total Apparent ABS	< 0.01	< 0.01
Ammonia (Albumoid NH_3)	0.10	0.08
Ammonia (Free NH_3)	0.02	0.02
Dissolved Oxygen (O_2)	9.1	9.0
Carbonic Acid (H_2CO_3)	72	86
Silica (SiO_2) (Soluble SiO_2)	3	4
Tannins & Liggins	< 0.05	< 0.05
Derived Values		
Hardness as $CaCO_3$	130	163
Alkalinity as $CaCO_3$	120	143
Total Solids		
Residue at 200°C	170	211
Physical Measurements		
Conductivity (Micromhos/CM/	283	352
pH	8.2	8.3
Turbidity (Units)	0.3	0.4
Color (Units)	0	0
Carbon Chloroform Extract (μg/1)		85.6

SAN FRANCISCO WATER DEPARTMENT

MINERAL ANALYSES

TABLE III

Source	E Crystal Springs Lines	F San Andreas Lines (filtered water)
Date Sampled	Sept. 16, 1976	Aug. 4, 1976
CHEMICAL CONSTITUENTS	mg/liter	mg/liter
Cations (+)		
Aluminum	0.01	0.01
Arsenic	< 0.001	< 0.001
Barium	< 0.5	< 0.5
Boron	0.005	0.006
Cadmium	< 0.001	< 0.001
Calcium	10.4	10.8
Chromium	< 0.005	< 0.005
Cooper	< 0.01	< 0.01
Iron	< 0.01	< 0.01
Lead	< 0.01	< 0.01
Magnesium	4.4	4.0
Manganese	< 0.01	< 0.01
Mercury	< 0.0006	< 0.0006
Potassium	0.6	0.6
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Sodium	3.9	6.6
Zinc	0.04	0.03
Anions (-)		
Bicarbonate	50.0	46.4
Carbonate	0.0	0.0
Chloride	5	8
Cyanide	< 0.001	< 0.001
Fluoride	0.2	1.0
Hydroxide	0	0
Nitrate	< 0.05	< 0.05
Nitrite	< 0.001	< 0.001
Phosphate	0.01	0.01
Sulfate	5.3	8.8
Nonionics		
Total Apparent ABS	< 0.01	< 0.01
Ammonia (Albumoid NH_3)	0.02	0.04
Ammonia (Free NH_3)	< 0.01	< 0.01
Dissolved Oxygen (O_2)	10.4	9.2
Carbonic Acid (H_2CO_3)	25	23
Silica (SiO_2) (Soluble SiO_2)	3	1
Tannins & Liggins	< 0.05	< 0.05
Derived Values		
Hardness as $CaCO_3$	44	44
Alkalinity as $CaCO_3$	41	38
Total Solids		
Residue at 200°C	59	68
Physical Measurements		
Conductivity (Micromhos/CM)	98	114
pH	8.3	8.0
Turbidity (Units)	0.5	0.3
Color (Units)	0	0
Carbon Chloroform Extract (µg/l)		

SAN FRANCISCO WATER DEPARTMENT

MINERAL ANALYSES

TABLE IV

	G	H
Source	Pilarcitos Reservoir	Stone Dam Reservoir
Date Sampled	Sept. 15, 1976	Sept. 15, 1976
CHEMICAL CONSTITUENTS	mg/liter	mg/liter
Cations (+)		
Aluminum	0.01	0.02
Arsenic	< 0.001	< 0.001
Barium	< 0.5	< 0.5
Boron	0.012	0.006
Cadmium	< 0.001	< 0.001
Chromium	< 0.005	< 0.005
Copper	< 0.01	< 0.01
Iron	< 0.01	< 0.01
Lead	< 0.01	< 0.01
Magnesium	6.1	7.8
Manganese	< 0.01	< 0.01
Mercury	< 0.0006	< 0.0006
Potassium	0.4	0.8
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Sodium	15.5	16.0
Zinc	0.02	0.04
Calcium	17.6	22.4
Anions (-)		
Bicarbonate	80.5	102.5
Carbonate	0.0	0.0
Chloride	20	22
Cyanide	< 0.001	< 0.001
Fluoride	0.1	0.1
Hydroxide	0	0
Nitrate	< 0.05	< 0.05
Nitrite	< 0.001	< 0.001
Phosphate	0.01	0.05
Sulfate	8.0	7.9
Nonionics		
Total Apparent ABS	< 0.01	< 0.01
Ammonia (Albumoid NH_3)	0.07	0.08
Ammonia (Free NH_3)	0.05	0.06
Dissolved Oxygen (O_2)	8.0	8.1
Carbonic Acid (H_2CO_3)	40	50
Silica (SiO_2) (Soluble SiO_2)	5	10
Tannins & Liggins	< 0.05	0.05
Derived Values		
Hardness as $CaCO_3$	69	88
Alkalinity as $CaCO_3$	66	84
Total Solids		
Residue at 200°	116	140
Physical Measurements		
Conductivity (Micromhos/CM)	194	233
pH	8.0	8.3
Turbidity (Units)	0.5	1.0
Color (Units)	0	5
Carbon Chloroform Extract (µg/l)		

SAN FRANCISCO WATER DEPARTMENT

MINERAL ANALYSES

TABLE V

Source	I Lake Merced Reservoir	J Sunol Filters
Date Sampled	Sept. 14, 1976	Aug. 3, 1976
CHEMICAL CONSTITUENTS	mg/liter	mg/liter
Cations (+)		
Aluminum	0.02	0.01
Arsenic	< 0.001	< 0.001
Barium	< 0.5	< 0.5
Boron	0.019	0.034
Cadmium	< 0.001	< 0.001
Calcium	28.0	57.3
Chromium	< 0.005	< 0.005
Copper	< 0.01	< 0.01
Iron	< 0.01	< 0.01
Lead	< 0.01	< 0.01
Magnesium	28.7	20.7
Manganese	< 0.01	< 0.01
Mercury	< 0.0006	< 0.0006
Potassium	2.2	1.9
Selenium	< 0.01	< 0.01
Silver	< 0.001	< 0.001
Sodium	53.6	22.8
Zinc	0.04	0.04
Anions (-)		
Bicarbonate	164.7	231.8
Carbonate	21.6	0.0
Chloride	80	22
Cyanide	< 0.001	< 0.001
Fluoride	0.1	0.1
Hydroxide	0	0
Nitrate	< 0.05	3.0
Nitrite	< 0.001	< 0.001
Phosphate	0.06	0.02
Sulfate	22.8	53.7
Nonionics		
Total Apparent ABS	< 0.01	< 0.01
Ammonia (Albumoid NH_3)	0.04	0.05
Ammonia (FreeNH_3)	0.02	0.01
Dissolved Oxygen (O_2)	7.9	-
Carbonic Acid (H_2CO_3)	103	114
Silica (SiO_2) (Soluble SiO_2)	30	13
Tannins & Liggins	0.05	< 0.05
Derived Values		
Hardness as $CaCO_3$	188	228
Alkalinity as $CaCO_3$	171	190
Total Solids		
Residue at 200° C	341	293
Physical Measurements		
Conductivity (Micromhos/CM)	568	488
pH	8.8	8.3
Turbidity (Units)	2.0	0.1
Color (Units)	5	0
Carbon Chloroform Extract (µg/l)		

LENGTH OF VARIOUS SIZES OF TRANSMISSION MAINS IN FEET

	28"	30"/33"*	36"	37"/39"*	42"	44"	48"	54"	57"	60"
Pleasanton		27,432								
Niles-Irvington						15,600				
Calaveras						30,570	1,045			
Bay Division #1					3,161s				6,821	102,131
Bay Division #2					250r			6,066s		
Bay Division #3										
Alameda Cr. Siphon										
Crystal Springs #1			123			84,821		358		4,948
Crystal Springs #2		669			100			16,757		84,317
C. S. Bypass Pipeline										75
Sunset & C. S. #3										17,549
Sunset Pipeline								337		46,030
San Andreas Branch of Sunset Pipeline										41
San Andreas #1			2,334		3,150	21,048				
San Andreas #2								64,781		
Baden-Merced		32,304	2,260	1,500						
San Andreas Outlet Conn. Pipes		5,024						869		1,739
Palo Alto			28,049							
Pilarcitos Aqueduct	7,480	169*	648			370				
Stone Dam Aqueduct		501		1,814*		2,106	2,894			
C.S. - S.A. Aqueduct		103				30				23,218
San Antonio								110		10,940
Sunol Pump		170	7,697							
TOTAL	7,480	66,372	41,111	3,314	6,661	154,905	3,939	89,278	6,821	290,988

s - submarine pipes

r - risers

(continued)

TABLE NO. 4

LENGTH OF VARIOUS SIZES OF TRANSMISSION MAINS IN FEET (cont'd)

	61/62"*	66/69"*	72"	76"*/78"	79"	84"	90/91"*	96"	Total Feet	Miles
Pleasanton									27,432	5.19
Niles-Irvington									15,600	2.95
Calaveras									31,615	5.99
Bay Division #1									112,113	21.23
Bay Division #2	26,094*	78,856		3,867*					115,133	21.81
Bay Division #3			132,828	45,092			1,188		179,108	33.92
Bay Division #4			672			42,588	90,469	44,966	178,695	33.84
Alameda Creek Siphon		2,942*	93				2,972	2,941	8,948	1.70
Crystal Springs #1									90,250	17.09
Crystal Springs #2				716					102,559	19.42
C. S. Bypass Pipeline								4,425	4,500	0.86
Sunset & C. S. #3	1,529			145	14,629		5,311		39,163	7.41
Sunset Pipeline	37,952								84,319	15.97
San Andreas Br. of Sunset Pipeline	5,978								6,019	1.14
San Andreas #1									26,532	5.04
San Andreas #2									64,781	12.26
Baden-Merced									36,064	6.83
San Andreas Outlet Conn. Pipes	873		1,276						9,781	1.85
Palo Alto									28,049	5.31
Pilarcitos Aqueduct									9,027	1.71
Stone Dam Aqueduct									7,315	1.39
C. S. & S. A. Aqueduct		356	820						24,527	4.66
San Antonio									11,050	2.09
Sunol Pump									7,867	1.49
Sunol Plant to Siphon				8,512					8,512	1.61
TOTALS	72,426	82,154	135,689	58,332	14,629	42,588	99,940	52,332	1,228,959	232.76

METERS - NUMBER AND SIZE IN SERVICE
SAN FRANCISCO DISTRICT AS OF JUNE 30, 1976

CLASS OF CONSUMERS	5/8"	3/4"	1"	1½"	2"	3"	4"	6"	8"	10"	12"	TOTAL
REVENUE PRODUCING												
Commercial	13,242	1,739	4,136	3,433	6,431	358	583	707	498	7	3	31,137
Residential	114,181	10,425	3,104	481	101	-	-	-	-	-	-	128,292
Docks & Shipping	71	8	27	35	126	-	-	2	3	2	-	274
Total	127,494	12,172	7,267	3,949	6,658	358	583	709	501	9	3	159,703
NON-REVENUE PRODUCING												
Commercial	1,065	44	71	71	101	10	8	3	8	-	-	1,381
Residential	913	44	12	1	-	-	-	-	-	-	-	970
Docks & Shipping	16	1	4	5	9	-	-	-	-	-	-	35
Total	1,994	89	87	77	110	10	8	3	8	-	-	2,386
TOTALS												
Commercial	14,307	1,783	4,207	3,504	6,532	368	591	710	506	7	3	32,518
Residential	115,094	10,469	3,116	482	101	-	-	-	-	-	-	129,262
Docks & Shipping	87	9	31	40	135	-	-	2	3	2	-	309
Total	129,488	12,261	7,354	4,026	6,768	368	591	712	509	9	3	162,089

Total meters in service as of June 30, 1976		162,089
Less: Extra meters in 1,403 Batteries (4,060-1,403)	2,657	
Extra meters in 9 consolidations (33-9)	24	
Non-Revenue Meters (Temporarily Shut-off)	2,386	5,067
Number of active Accounts as of June 30,1976		157,022

The above meter count includes 2,751 Fire Services at Docks & Shipping Office, portable meters used on hydrants as needed 17 - 1½" and 31-2" meters on Hydrants in use by Builders and Contractors 49 - 1" and 32 - 2"

PREVIOUS RECORDS

	1971-72	1972-73	1973-74	1974-75	1975-76
Total Meters	162,105	162,207	162,332	162,357	162,089
Increase	(239)	102	125	25	(268)
Idle Meters	2,651	2,919	2,779	2,445	2,386

METERS - NUMBER AND SIZE IN SERVICE
SUBURBAN DISTRICT AS OF JUNE 30, 1976

CLASS OF CONSUMBERS	5/8"	3/4"	1"	1½"	2"	3"	4"	6"	8"	10"	12"	16"	TOTAL
REVENUE PRODUCING													
Regular Rates	358	37	33	18	116	1	18	88	103	36	5	7	820
Airport Use	6	7	16	10	43	-	4	11	15	4	2	-	118
Total	364	44	49	28	159	1	22	99	118	40	7	7	938
NON- REVENUE PRODUCING													
Regular Rates	5	1	-	1	-	-	1	1	4	2	-	-	15
Airport Use	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	5	1	-	1	-	-	1	1	4	2	-	-	15
TOTALS													
Regular Rates	363	38	33	19	116	1	19	89	107	38	5	7	835
Airport Use	6	7	16	10	43	-	4	11	15	4	2	-	118
Total	369	45	49	29	159	1	23	100	122	42	7	7	953

Total meters in service as of June 30,1976		953
Less extra meters in 93 batteries and consolidations (415-93)	322	
Non-Revenue meters(Temporarily shut-off)	15	337
Number of active Suburban Accounts as of June 30,1976		616
Number of Non-metered accounts (Active Airport)		11
		627

PREVIOUS RECORDS	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Total Meters	936	945	943	963	949	953
Increase or (Decrease)	4	9	(2)	20	(14)	4
Idle Meters	15	23	21	16	10	15

TABLE NO. 5

PIPE RECORDS
CITY DISTRIBUTION SYSTEM

Size	Total Pipe in ground * June 30,1975	Pipe Laid 1975-76*	Removed or Abandoned 1975-76*	Total Pipe in ground June 30,1976*
	WROUGHT IRON AND STEEL PIPE			
0-3/4"	9,047	0	0	9,047
1	29,760	0	0	29,760
1¼	3,398	0	0	3,398
1½	121,723	60	165	121,618
2	108,844	637	664	108,817
3	439	0	0	439
4	3,886	0	0	3,886
6	1,798	27	0	1,825
8	1,184	238	856	566
12	7,316	0	0	7,316
13	456	0	0	456
16	19,801	0	0	19,801
18	4,153	0	0	4,153
20	87,496	0	0	87,496
22	22,321	0	0	22,321
23½	1,187	0	0	1,187
24	78,193	0	0	78,193
30	47,695	0	0	47,695
33	2,409	0	0	2,409
36	56,616	0	0	56,616
37½	8,896	0	0	8,896
44	22,266	0	0	22,266
48	12,818	0	0	12,818
60	26,216	0	0	26,216
TOTAL	677,918	962	1,685	677,195
	DUCTILE IRON AND CAST IRON PIPE			
2"	22,351	0	140	22,211
3	42,889	0	1,801	41,088
4	483,258	2,744	5,024	480,978
6	2,099,769	3,272	1,002	2,102,039
8	1,756,642	9,211	2,939	1,762,914
10	3,287	0	0	3,287
12	604,229	4,903	54	609,078
16	381,391	1,998	18	383,371
20	22,609	0	0	22,609

TABLE NO. 5
(continued)

Size	Total Pipe in Ground June 30, 1975*	Pipe Laid 1975-76*	Removed or Abandoned 1975-76*	Total Pipe in Ground June 30, 1976*
	DUCTILE IRON AND CAST IRON PIPE (cont'd.)			
22"	12,198	0	0	12,198
24	60,093	0	0	60,093
30	4,397	0	0	4,397
TOTAL	5,493,113	22,128	10,978	5,504,263
	TRANSITE PIPE			
6"	16,982	0	0	16,982
8	24,552	0	0	24,552
TOTAL	41,534	0	0	41,534
	PLASTIC PIPE			
1"	166	360	200	326
2	98	92	0	190
TOTAL	264	452	200	516
TOTAL ALL PIPES	6,212,829	23,542	12,863	6,223,508
TOTAL MILES	1,177	4	2	1,179

* All numbers are in feet unless otherwise noted.

STREET MAIN TAPS AND SERVICE CONNECTION RECORDS

SAN FRANCISCO DISTRICT JUNE 30, 1976

TAPS ON STREET MAINS

	Wharf	3/4"	1"	1½"	2"	3"	4"	6"	8"	10"	12"	16"	TOTAL
June 30,1975	376	112,546	70,679	6,111	4,779	1,605	1,203	976	594	9	27	2	198,907
Add 1975-1976	0	(4,309)	4,867	80	130	41	30	9	9	1	0	0	858
JUNE 30,1976	376	108,237	75,546	6,191	4,909	1,646	1,233	985	603	10	27	2	199,765

SERVICE CONNECTIONS

Services connected to street mains, as above	199,765
Distributors being one or more additional meter connections to service pipe	821
Total connections of record	200,586
Disconnected services	41,178

Net metered line services consisting of 159,703 active meters, less 2,681

Extra meters in batteries, plus 2386 services temporarily shut-off

PREVIOUS RECORDS	1972-73	1973-74	1974-75	1975-76
Active	159,288	159,553	159,912	159,703
Shut-off	2,919	2,779	2,445	2,386
Total	162,207	162,332	162,357	162,089
Less extra battery meters	2,692	2,796	2,824	2,681
Net	159,515	159,536	159,533	159,408

SERVICE INSTALLATIONS

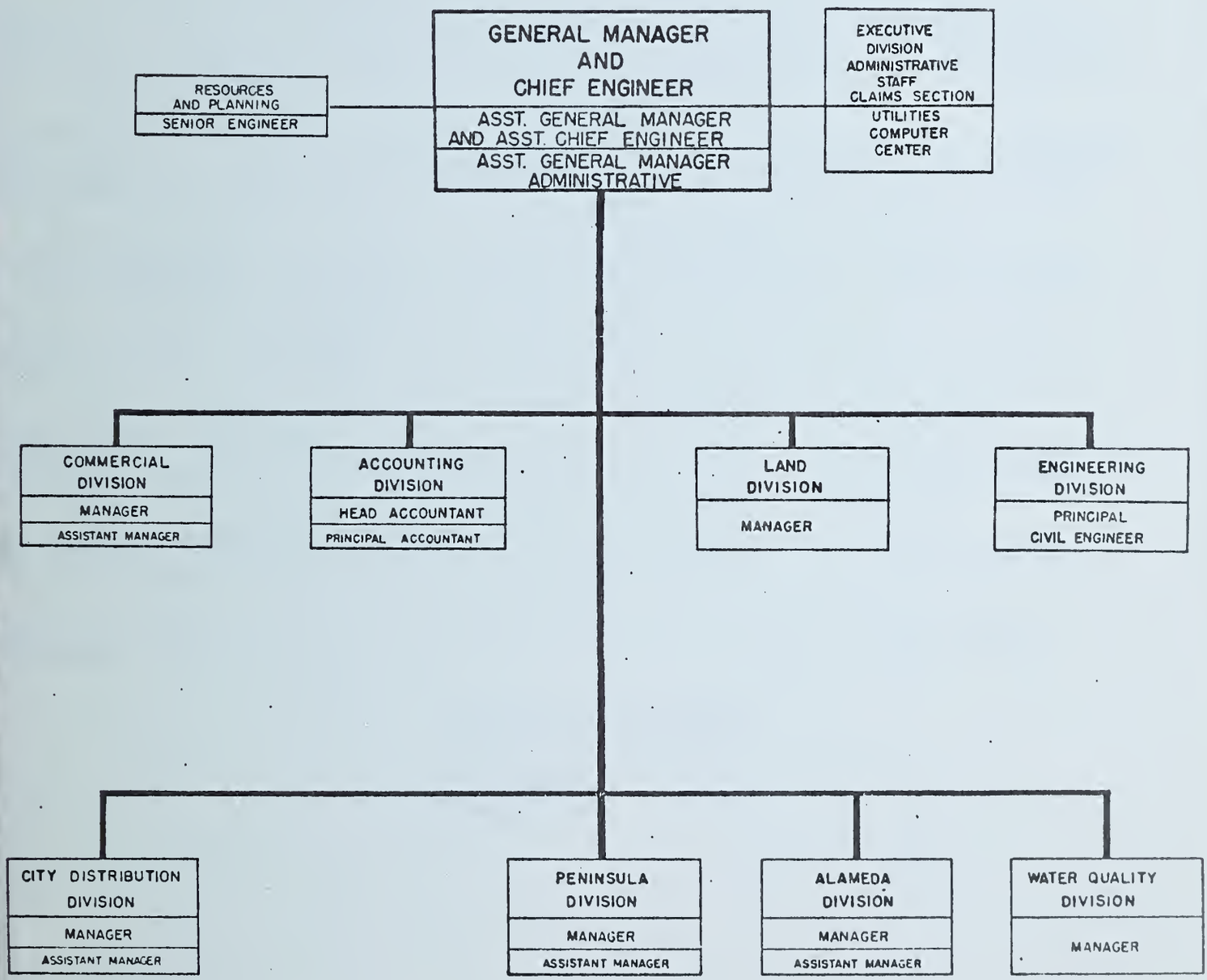
DISTRICT	FISCAL YEAR	DISTRIBUTORS	TOTALS
Richmond	23	0	23
Sunset	38	0	38
N. Market & Western Addition	211	0	211
S. Market & Twin Peaks	203	0	203
Waterfront	0	0	0
	575	0	575

PREVIOUS YEARS	TAPS	DISTRIBUTORS	TOTALS
1972-73	694	0	694
1973-74	635	0	635
1974-75	538	0	538

( ) RED FIGURES

ORGANIZATION AND PERSONNEL

CITY AND COUNTY OF SAN FRANCISCO
PUBLIC UTILITIES COMMISSION
SAN FRANCISCO WATER DEPARTMENT
ORGANIZATION CHART



PERSONNEL

General Manager and Chief Engineer ..... Arthur H. Frye, Jr.
Asst. Gen' l. Mgr., Operations and Maintenance ..... K. R. Boyd
Assistant General Manager, Administrative ..... C. J. Roche

ENGINEERING DIVISION
Principal Engineer ..... J. L. Bardoff
Senior Civil Engineer, Design ..... P. T. Matsumura
Senior Civil Engineer, Construction ..... D. P. Cooper

RESOURCES AND PLANNING
Senior Civil Engineer ..... T. Q. Chan

CITY DISTRIBUTION DIVISION
Manager ..... J. E. Kenck
Assistant Manager ..... G. Y. Nakagaki
Shop Superintendent ..... F. L. Baggetta

PENINSULA DIVISION
Manager ..... E. J. Kelleher
Assistant Manager ..... E. L. Fonseca

ALAMEDA DIVISION
Acting Manager ..... G. J. Caccia
Acting Assistant Manager ..... T. W. Carter

WATER QUALITY DIVISION
Manager ..... H. W. Tracy

COMMERCIAL DIVISION
Manager ..... T. P. Kearney
Assistant Manager ..... F. Frery

ACCOUNTING DIVISION
Chief Accountant ..... H. Guetersloh, Jr.

LAND DIVISION
Manager ..... R. Tanaka

NUMBER OF EMPLOYEES

Permanent	635
Temporary	55

RETIRED EMPLOYEES

AND

IN MEMORIAM

R E T I R E D

July 1, 1975 through June 30, 1976

During this fiscal year, the following employees were retired from service and recognition is given to their faithful services in the organization:

Employee		Classification	Years of Service with Water Dept.
Anagnos, John	7328	Operating Engineer, Universal	13
Briggs, Mildred A.	1446	Senior Clerk Stenographer	10
Brooks, Ben F.	6318	Construction Inspector	12
Caccia Geno J.	5150	Alameda Division Assistant Manager	13
Carlson, Norman H.	7250	Utility Foreman	15
Charcho, Anthony J.	7250	Utility Foreman	15
Clark, Leroy	7463	Utility Plumber Apprentice	20
Collier, Frank	7514	General Laborer	11
Connor, William	7250	Utility Foreman	14
Fardella, Tony J.	7514	General Laborer	29
Finnegan, Carter H.	2714	Janitor	13
Godal, Paul F.	7332	Maintenance Machinist	13
Goldsmith, Milton	7316	District Water Serviceman	23
Green, Theodore D.	7316	District Water Serviceman	24
Hanrahan, John E.	7316	District Water Serviceman	33
Hansen, Robert R., Jr.	7514	General Laborer	22
Howard, Vernon	7317	Senior District Water Serviceman	21
Huie, Edward	7316	District Water Serviceman	15
Johnson, Alonzo	7514	General Laborer	15
Johnson, Benjamin	7514	General Laborer	7
Jordan, Lloyd	7514	General Laborer	16
Keyak, Michael H.	5206	Associate Civil Engineer	14
Lally, Walter J., Jr.	7347	Plumber	23
Maher, Chris S.	7353	Water Meter Repairman	13
McLaughlin, Patrick J.	7316	District Water Serviceman	33
McVanner, Robert J.	7388	Utility Plumber	13
Mikelson, Carrol H.	7313	Automotive Machinist	18
Moll, Earl R.	7344	Carpenter	24
Patasaw, Stacey	7514	General Laborer	21
Peters, Frank P., Jr.	7470	Watershed Keeper	29
Price, Benjamin	7388	Utility Plumber	28
Rezos, James	7317	Senior District Water Serviceman	35
Ross, Raymond A.	7335	Senior Stationary Engineer	1

RETIRED (CONTINUED)

Employee		Classification	Years of Service with Water Dept.
Schreiber, Audrey F.	4320	Cashier 1	10
Sebanc, George T.	7463	Utility Plumber Apprentice	14
Simpson, John C., Jr.	7358	Patternmaker	24
Smith, Eleanor	1202	Personnel Clerk	12
Stoudt, Priscilla H.	1444	Clerk Stenographer	2
Szeghy, Claire A.	1478	Senior Water Services	7
Szeghy, Thomas	7207	Dock and Shipping Water Service Supervisor	37
Trubey, Robert N.	7316	District Water Serviceman	14
Walls, Edgar L.	7335	Senior Stationary Engineer	13
Walsh, Joseph P.	7470	Watershed Keeper	10

I N M E M O R I A M

Potasz, John D.	6318	Construction Inspector	16
Watson, Donald H.	7344	Carpenter	14
Williams, Claude D.	7514	General Laborer	11